

# CADMIUM OXIDE

COX

CAUTIONARY RESPONSE INFORMATION				4. FIRE HAZARDS	7. SHIPPING INFORMATION
Common Synonyms Cadmium fume	Solid	Yellow-brown	Odorless Sinks in water.	<p><b>4.1 Flash Point:</b> Not flammable</p> <p><b>4.2 Flammable Limits in Air:</b> Not flammable</p> <p><b>4.3 Fire Extinguishing Agents:</b> Not pertinent</p> <p><b>4.4 Fire Extinguishing Agents Not to Be Used:</b> Not pertinent</p> <p><b>4.5 Special Hazards of Combustion Products:</b> Toxic cadmium oxide fume may form in fires.</p> <p><b>4.6 Behavior in Fire:</b> Currently not available</p> <p><b>4.7 Auto Ignition Temperature:</b> Not pertinent</p> <p><b>4.8 Electrical Hazards:</b> Not pertinent</p> <p><b>4.9 Burning Rate:</b> Currently not available</p> <p><b>4.10 Adiabatic Flame Temperature:</b> Currently not available</p> <p><b>4.11 Stoichiometric Air to Fuel Ratio:</b> Not Pertinent</p> <p><b>4.12 Flame Temperature:</b> Currently not available</p> <p><b>4.13 Combustion Molar Ratio (Reactant to Product):</b> Not Pertinent</p> <p><b>4.14 Minimum Oxygen Concentration for Combustion (MOCC):</b> Not listed</p>	<p><b>7.1 Grades of Purity:</b> Reagent; technical</p> <p><b>7.2 Storage Temperature:</b> Ambient</p> <p><b>7.3 Inert Atmosphere:</b> No requirement</p> <p><b>7.4 Venting:</b> Open</p> <p><b>7.5 IMO Pollution Category:</b> Currently not available</p> <p><b>7.6 Ship Type:</b> Currently not available</p> <p><b>7.7 Barge Hull Type:</b> Currently not available</p>
KEEP PEOPLE AWAY. AVOID CONTACT WITH SOLID AND DUST. Wear a dust respirator. Notify local health and pollution control agencies. Protect water intakes.				8. HAZARD CLASSIFICATIONS	
Fire Not flammable. POISONOUS GASES MAY BE PRODUCED IN FIRE. Wear goggles and self-contained breathing apparatus.				<p><b>8.1 49 CFR Category:</b> Keep Away From Food</p> <p><b>8.2 49 CFR Class:</b> 6.1</p> <p><b>8.3 49 CFR Package Group:</b> III</p> <p><b>8.4 Marine Pollutant:</b> Yes</p> <p><b>8.5 NFPA Hazard Classification:</b> Not listed</p> <p><b>8.6 EPA Reportable Quantity:</b> Not listed.</p> <p><b>8.7 EPA Pollution Category:</b> Not listed.</p> <p><b>8.8 RCRA Waste Number:</b> Not listed</p> <p><b>8.9 EPA FWPCA List:</b> Not listed</p>	
Exposure CALL FOR MEDICAL AID. DUST POISONOUS IF INHALED. If inhaled will cause coughing. If in eyes, hold eyelids open and flush with plenty of water. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen.  SOLID Irritating to skin and eyes. If swallowed will cause nausea and vomiting. 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.				9. PHYSICAL & CHEMICAL PROPERTIES	
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.				<p><b>9.1 Physical State at 15° C and 1 atm:</b> Solid</p> <p><b>9.2 Molecular Weight:</b> 128.4</p> <p><b>9.3 Boiling Point at 1 atm:</b> Not pertinent (decomposes)</p> <p><b>9.4 Freezing Point:</b> Not pertinent</p> <p><b>9.5 Critical Temperature:</b> Not pertinent</p> <p><b>9.6 Critical Pressure:</b> Not pertinent</p> <p><b>9.7 Specific Gravity:</b> 6.95 at 20°C (solid)</p> <p><b>9.8 Liquid Surface Tension:</b> Not pertinent</p> <p><b>9.9 Liquid Water Interfacial Tension:</b> Not pertinent</p> <p><b>9.10 Vapor (Gas) Specific Gravity:</b> Not pertinent</p> <p><b>9.11 Ratio of Specific Heats of Vapor (Gas):</b> Not pertinent</p> <p><b>9.12 Latent Heat of Vaporization:</b> Not pertinent</p> <p><b>9.13 Heat of Combustion:</b> Not pertinent</p> <p><b>9.14 Heat of Decomposition:</b> Not pertinent</p> <p><b>9.15 Heat of Solution:</b> Not pertinent</p> <p><b>9.16 Heat of Polymerization:</b> Not pertinent</p> <p><b>9.17 Heat of Fusion:</b> Currently not available</p> <p><b>9.18 Limiting Value:</b> Currently not available</p> <p><b>9.19 Reid Vapor Pressure:</b> Currently not available</p>	
1. CORRECTIVE RESPONSE ACTIONS Stop discharge Collection Systems: Dredge				6. WATER POLLUTION	
2. CHEMICAL DESIGNATIONS 2.1 CG Compatibility Group: Not listed. 2.2 Formula: CdO 2.3 IMO/UN Designation: Not listed 2.4 DOT ID No.: 2570 2.5 CAS Registry No.: 1306-19-0 2.6 NAERG Guide No.: 154 2.7 Standard Industrial Trade Classification: 52329				<p><b>6.1 Aquatic Toxicity:</b> Currently not available</p> <p><b>6.2 Waterfowl Toxicity:</b> Currently not available</p> <p><b>6.3 Biological Oxygen Demand (BOD):</b> None</p> <p><b>6.4 Food Chain Concentration Potential:</b> Concentrated by shellfish</p> <p><b>6.5 GESAMP Hazard Profile:</b> Not listed</p>	
3. HEALTH HAZARDS 3.1 Personal Protective Equipment: Bu. Mines approved respirator; goggles; rubber gloves				NOTES	
3.2 Symptoms Following Exposure: A single exposure to cadmium oxide fumes can cause severe or fatal lung irritation; chronic poisoning is characterized by lung injury (emphysema) and kidney dysfunction. Ingestion produces severe toxic effects; both kidney and liver injuries may occur. Contact with eyes causes irritation.					
3.3 Treatment of Exposure: INHALATION: if there has been known exposure to dense cadmium oxide fume or if cough, chest tightness, or respiratory distress occur after possible exposure, place patient at bed rest and call a physician. INGESTION: induce vomiting; stop irritation by giving milk or egg whites at frequent intervals; perform gastric lavage; seek medical attention. EYES: flush with water for at least 15 min.					
3.4 TLV-TWA: 0.01 mg Cd/m <sup>3</sup> inhalable; 0.002 mg Cd/m <sup>3</sup> respirable fraction.					
3.5 TLV-STEL: Not listed.					
3.6 TLV-Ceiling: Not listed.					
3.7 Toxicity by Ingestion: Grade 3; oral rat LD <sub>50</sub> = 72 mg/kg					
3.8 Toxicity by Inhalation: Currently not available.					
3.9 Chronic Toxicity: Delayed liver, lung, and kidney damage has followed respiratory exposures to cadmium salts in industry.					
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: 9 mg/m <sup>3</sup> as Cd					
3.14 OSHA PEL-TWA: 0.005 mg/m <sup>3</sup> as Cd					
3.15 OSHA PEL-STEL: Not listed.					
3.16 OSHA PEL-Ceiling: Not listed.					
3.17 EPA AEGL: Not listed					

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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
INSOLUBLE			NOT PERTINENT		NOT PERTINENT		NOT PERTINENT