

ZINC CYANIDE

ZCN

CAUTIONARY RESPONSE INFORMATION				4. FIRE HAZARDS	7. SHIPPING INFORMATION
Common Synonyms Cyanide of zinc Zinc dicyanide	Solid-powder Sinks in water.	Greyish white to white	Odorless	<p>4.1 Flash Point: Not flammable</p> <p>4.2 Flammable Limits in Air: Not flammable</p> <p>4.3 Fire Extinguishing Agents: Not pertinent</p> <p>4.4 Fire Extinguishing Agents Not to Be Used: Not pertinent</p> <p>4.5 Special Hazards of Combustion Products: Not pertinent</p> <p>4.6 Behavior in Fire: Not pertinent</p> <p>4.7 Auto Ignition Temperature: Not flammable</p> <p>4.8 Electrical Hazards: Currently not available</p> <p>4.9 Burning Rate: Not flammable</p> <p>4.10 Adiabatic Flame Temperature: Currently not available</p> <p>4.11 Stoichiometric Air to Fuel Ratio: Not pertinent</p> <p>4.12 Flame Temperature: Currently not available</p> <p>4.13 Combustion Molar Ratio (Reactant to Product): Not pertinent</p> <p>4.14 Minimum Oxygen Concentration for Combustion (MOCC): Not listed</p>	<p>7.1 Grades of Purity: 55% Zn 40% Cn</p> <p>7.2 Storage Temperature: Ambient</p> <p>7.3 Inert Atmosphere: Currently not available</p> <p>7.4 Venting: Currently not available</p> <p>7.5 IMO Pollution Category: Currently not available</p> <p>7.6 Ship Type: Currently not available</p> <p>7.7 Barge Hull Type: Currently not available</p>
Fire	Not flammable.				
Exposure	<p>CALL FOR MEDICAL AID. DUST POISONOUS IF INHALED OR IF SKIN IS EXPOSED. Move to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen.</p> <p>SOLID POISONOUS IF SWALLOWED OR IF SKIN IS EXPOSED. Irritating to eyes. 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.</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.				
1. CORRECTIVE RESPONSE ACTIONS		2. CHEMICAL DESIGNATIONS			
Stop discharge Collection Systems: Dredge		<p>2.1 CG Compatibility Group: Not listed.</p> <p>2.2 Formula: <chem>Zn(CN)2</chem></p> <p>2.3 IMO/UN Designation: 6.1/1713</p> <p>2.4 DOT ID No.: 1713</p> <p>2.5 CAS Registry No.: 557-21-1</p> <p>2.6 NAERG Guide No.: 151</p> <p>2.7 Standard Industrial Trade Classification: 52381</p>			
3. HEALTH HAZARDS					
<p>3.1 Personal Protective Equipment: Approved dust respirator, air or oxygen mask in emergencies, chemical safety goggles, dry cotton gloves for handling solids and rubber gloves for solutions, hard hat or brimmed felt hat, rubber or leather safety shoes, long sleeved shirt.</p> <p>3.2 Symptoms Following Exposure: EYES: Causes eye burns. SKIN: Irritation. INGESTION OR INHALATION: A bitter, acrid burning taste is sometimes noted followed by a feeling of constriction or numbness in the throat. Salivation and nausea are not unusual, but vomiting is rare. Anxiety, confusion, vertigo, giddiness and often a sensation of stiffness in the lower jaw. Hypernea and dyspnea. Rapid respiration, then slow and irregular. Unconsciousness, convulsions, death from respiratory arrest.</p> <p>3.3 Treatment of Exposure: Call a physician. INHALATION: Remove to well-ventilated place. Remove contaminated clothing. Keep patient quiet and warm. Administer by inhalation amyl nitrate for 15 seconds. Repeat about five times at 15-second intervals. Repeat procedure three or four times at 5-minute intervals. If breathing stops apply artificial respiration. When breathing starts use amyl nitrate. EYES: Flush with plenty of water for 15 minutes. SKIN: Remove clothing. Wash with soap and water. INGESTION: Induce vomiting and give 1% sodium thiosulfate solution. Then proceed with treatment as described for inhalation.</p> <p>3.4 TLV-TWA: Not listed.</p> <p>3.5 TLV-STEL: Not listed.</p> <p>3.6 TLV-Ceiling: 5 mg/m³ as cyanide.</p> <p>3.7 Toxicity by Ingestion: Grade 4; LD₅₀ below 50 mg/kg.</p> <p>3.8 Toxicity by Inhalation: Currently not available.</p> <p>3.9 Chronic Toxicity: Chronic exposure may cause headache, lack of appetite, weakness and inflammation of the skin with small pimples or blistery spots.</p> <p>3.10 Vapor (Gas) Irritancy Characteristics: Not pertinent</p> <p>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.</p> <p>3.12 Odor Threshold: Odorless</p> <p>3.13 IDLH Value: 25 mg/m³ as cyanide</p> <p>3.14 OSHA PEL-TWA: 5 mg/m³ as cyanide</p> <p>3.15 OSHA PEL-STEL: Not listed</p> <p>3.16 OSHA PEL-Ceiling: Not listed.</p> <p>3.17 EPA AEGL: Not listed</p>	<p>5. CHEMICAL REACTIVITY</p> <p>5.1 Reactivity with Water: No reaction</p> <p>5.2 Reactivity with Common Materials: Contact with acids or acid salts will liberate highly toxic and flammable hydrogen cyanide gas.</p> <p>5.3 Stability During Transport: Stable</p> <p>5.4 Neutralizing Agents for Acids and Caustics: Hypochlorite solution to destroy the cyanide.</p> <p>5.5 Polymerization: Will not occur.</p> <p>5.6 Inhibitor of Polymerization: Not pertinent</p>				
6. WATER POLLUTION					
<p>6.1 Aquatic Toxicity: Toxic to fish in range 0.05 to 10 ppm (as Cn). Toxicity increases with acidity, temperature, low oxygen tensions and Zn content.</p> <p>6.2 Waterfowl Toxicity: Currently not available</p> <p>6.3 Biological Oxygen Demand (BOD): 62.4 mg/l Zn will cause a 50% drop in five day BOD.</p> <p>6.4 Food Chain Concentration Potential: Zn may accumulate slightly.</p> <p>6.5 GESAMP Hazard Profile:</p> <ul style="list-style-type: none"> Bioaccumulation: 0 Damage to living resources: 4 Human Oral hazard: 3 Human Contact hazard: I Reduction of amenities: 0 					
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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