

# LEAD CHLORIDE

LCL

## CAUTIONARY RESPONSE INFORMATION

<b>Common Synonyms</b> Lead (II) chloride Lead dichloride Plumbous chloride		Solid White  Sinks and mixes with water.
Keep people away. Avoid contact with solid and dust. Wear goggles, self-contained breathing apparatus, rubber overclothing (including gloves). Notify local health and pollution control agencies.		
<b>Fire</b>	Not flammable. POISONOUS METAL FUMES MAY BE PRODUCED IN FIRE. Wear goggles, self-contained breathing apparatus, rubber overclothing (including gloves).	
<b>Exposure</b>	CALL FOR MEDICAL AID. DUST AND FUMES. POISONOUS IF INHALED. Move to fresh air. Keep victim quiet and warm.  SOLID If swallowed, may cause metallic taste, abdominal pain, vomiting and diarrhea. Flush affected area 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, have victim induce vomiting. IF SWALLOWED and victim is UNCONSCIOUS, do nothing except keep victim warm.	
<b>Water Pollution</b>	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.	

<b>1. CORRECTIVE RESPONSE ACTIONS</b> Stop discharge Collection Systems: Dredge	<b>2. CHEMICAL DESIGNATIONS</b> 2.1 CG Compatibility Group: Not listed. 2.2 Formula: PbCl <sub>2</sub> 2.3 IMO/UN Designation: Not listed 2.4 DOT ID No.: 2291 2.5 CAS Registry No.: 7758-95-4 2.6 NAERG Guide No.: 151 2.7 Standard Industrial Trade Classification: 52329
<b>3. HEALTH HAZARDS</b> 3.1 <b>Personal Protective Equipment:</b> Wear approved filter mask, rubber gloves, and safety glasses. 3.2 <b>Symptoms Following Exposure:</b> INHALATION: Joint and muscle pains, headache, dizziness and insomnia. Weakness, frequently of extensor muscles of hand and wrist (unilateral or bilateral). Heavy contamination - brain damage. Stupor progressing to coma - with or without convulsion, often death. Excitation, confusion, and mania less common. Cerebrospinal pressure may be increased. INGESTION: Abdominal pain, diarrhea, constipation, loss of appetite, muscular weakness, headache, blue line on gums, metallic taste, nausea, and vomiting. 3.3 <b>Treatment of Exposure:</b> Call a physician. INHALATION: Remove from source of exposure. Keep victim quiet and warm. EYES: Flush with plenty of water. SKIN: Wash with soap and water. INGESTION: Induce vomiting and follow with gastric lavage. Administer saline cathartic and an enema. Give antispasmodic (calcium gluconate, atropine, papaverine) for relief of colic. If pain is severe morphine sulfate may be considered. 3.4 TLV-TWA: 0.05 mg/m <sup>3</sup> as (lead). 3.5 TLV-STEL: Not listed. 3.6 TLV-Ceiling: Not listed. 3.7 <b>Toxicity by Ingestion:</b> Guinea pig minimum lethal dose 1500 to 2000 mg/kg. 3.8 <b>Toxicity by Inhalation:</b> Currently not available. 3.9 <b>Chronic Toxicity:</b> In man 6 mg/m <sup>3</sup> /day inhaled long term produces histological and pathological effects. 1.2 mg/day ingested long term produces CNS disorders. Teratogenic effects. 3.10 <b>Vapor (Gas) Irritant Characteristics:</b> Currently not available 3.11 <b>Liquid or Solid Characteristics:</b> Currently not available 3.12 <b>Odor Threshold:</b> Currently not available 3.13 <b>IDLH Value:</b> 100 mg Pb/m <sup>3</sup> 3.14 <b>OSHA PEL-TWA:</b> 0.05 mg/m <sup>3</sup> (as lead). 3.15 <b>OSHA PEL-STEL:</b> Not listed. 3.16 <b>OSHA PEL-Ceiling:</b> Not listed. 3.17 <b>EPA AEGL:</b> Not listed	

## 4. FIRE HAZARDS

- 4.1 **Flash Point:**  
Not pertinent
- 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:** Toxic metal fumes
- 4.6 **Behavior in Fire:** Can emit toxic metal fumes
- 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:**  
Currently not available
- 5.3 **Stability During Transport:** Currently not available
- 5.4 **Neutralizing Agents for Acids and Caustics:** Currently not available
- 5.5 **Polymerization:** Currently not available
- 5.6 **Inhibitor of Polymerization:** Currently not available

## 6. WATER POLLUTION

- 6.1 **Aquatic Toxicity:**  
5.58 ppm/96-hour/ TL<sub>m</sub>/Fathead minnow/soft water  
482 ppm/96-hour/TL<sub>m</sub>/Fathead minnow/hard water  
23.8 ppm/96-hour/TL<sub>m</sub>/Bluegill /soft water  
442 ppm/96-hour/TL<sub>m</sub>/Bluegill /hard water  
31.5 ppm/96-hour/TL<sub>m</sub>/Goldfish /soft water  
20.6 ppm/96-hour/TL<sub>m</sub>/Guppy /soft water
- 6.2 **Waterfowl Toxicity:** Currently not available
- 6.3 **Biological Oxygen Demand (BOD):**  
Currently not available
- 6.4 **Food Chain Concentration Potential:**  
Both fish and animal life can concentrate lead.
- 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:** Keep Away From Food
- 8.2 **49 CFR Class:** 6.1
- 8.3 **49 CFR Package Group:** III
- 8.4 **Marine Pollutant:** Yes
- 8.5 **NFPA Hazard Classification:** Not listed
- 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:** 278.12
- 9.3 **Boiling Point at 1 atm:** 1742°F = 950°C = 1223.2°K
- 9.4 **Freezing Point:** 933.8°F = 501°C = 774.2°K
- 9.5 **Critical Temperature:** Currently not available
- 9.6 **Critical Pressure:** Currently not available
- 9.7 **Specific Gravity:** 5.85 at room temperature
- 9.8 **Liquid Surface Tension:** Not pertinent
- 9.9 **Liquid Water Interfacial Tension:** Not pertinent
- 9.10 **Vapor (Gas) Specific Gravity:** 9.59 (calculated)
- 9.11 **Ratio of Specific Heats of Vapor (Gas):**  
Currently not available
- 9.12 **Latent Heat of Vaporization:** 191.5 Btu/lb = 106.4 cal/g = 4.45 X 10<sup>5</sup> J/kg
- 9.13 **Heat of Combustion:** Currently not available
- 9.14 **Heat of Decomposition:** Currently not available
- 9.15 **Heat of Solution:** Endothermic 40.1 Btu/lb = 22.3 cal/g = 0.93 X 10<sup>5</sup> J/kg
- 9.16 **Heat of Polymerization:** Not pertinent
- 9.17 **Heat of Fusion:** 20.3 cal/g
- 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	575	0.074		N O T		N O T
	P E R T I N E N T	600	0.075		P E R T I N E N T		P E R T I N E N T
		625	0.075				
		650	0.075				
		675	0.076				
		700	0.076				
		725	0.077				
		750	0.077				
		775	0.078				
		800	0.078				
		825	0.078				
		850	0.079				
		875	0.079				
		900	0.080				
		925	0.080				
		950	0.081				
		975	0.081				
		1000	0.081				
		1025	0.082				
		1050	0.082				
		1075	0.083				
		1100	0.083				
		1125	0.084				
		1150	0.084				
		1175	0.084				
		1200	0.085				

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
40	0.595		N		N		C
50	0.744		O		O		U
60	0.892		T		T		R
70	1.041						R
80	1.190		P		P		E
90	1.338		E		E		N
100	1.487		R		R		T
110	1.636		T		T		L
120	1.785		I		I		L
130	1.933		N		N		L
140	2.082		E		E		L
150	2.231		N		N		L
160	2.379		T		T		A
170	2.528						V
180	2.677						A
190	2.826						I
200	2.974						L
210	3.123						A