

# LEAD STEARATE

LSA

## CAUTIONARY RESPONSE INFORMATION

<b>Common Synonyms</b> Neutral lead stearate Stearic acid, lead salt	Solid powder	White	Slight fatty odor
Sinks in water.			
<p>Keep people away. Shut off ignition sources and call fire department. Wear goggles, self-contained breathing apparatus, and protective clothing (including gloves). Notify local health and pollution control agencies.</p>			
<b>Fire</b>	<p>Not flammable. POISONOUS FUMES PRODUCED AT HIGH TEMPERATURES. Dusty may explode at high temperatures or source of ignition. Extinguish with CO<sub>2</sub> or foam.</p>		
<b>Exposure</b>	<p>CALL FOR MEDICAL AID. DUST POISONOUS IF INHALED. Move to fresh air. Keep victim quiet and warm.</p> <p>SOLID If swallowed will cause headache, abdominal pain, nausea and vomiting. Flush affected areas with water. IF IN EYES, hold eyelids open and flush with plenty of water. IF SWALLOWED and victim is CONSCIOUS, have victim drink milk or water, and have victim induce vomiting.</p>		
<b>Water Pollution</b>	<p>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.</p>		

### 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:** Pb(C<sub>18</sub>H<sub>35</sub>O<sub>2</sub>)<sub>2</sub>  
2.3 **IMO/UN Designation:** Not listed  
2.4 **DOT ID No.:** 2291  
2.5 **CAS Registry No.:** 7428-48-0  
2.6 **NAERG Guide No.:** 151  
2.7 **Standard Industrial Trade Classification:** 51376

### 3. HEALTH HAZARDS

- 3.1 **Personal Protective Equipment:** Dust and/or fume respirator, gloves, goggles or safety glasses, coveralls, and cap.
- 3.2 **Symptoms Following Exposure:** 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 **Treatment of Exposure:** Call a physician. INHALATION: Remove from the source of exposure. Keep victim quiet and warm. EYES: Wash with water for 15 to 20 minutes. SKIN: Wash with soap and water. INGESTION: Call a physician at once. Induce vomiting, give milk and magnesium sulfate (epsom salts).
- 3.4 **TLV-TWA:** 0.05 mg/m<sup>3</sup> as Pb.
- 3.5 **TLV-STEL:** Not listed.
- 3.6 **TLV-Ceiling:** Not listed.
- 3.7 **Toxicity by Ingestion:** Currently not available
- 3.8 **Toxicity by Inhalation:** Currently not available.
- 3.9 **Chronic Toxicity:** Intermittent vomiting, irritability, nervousness, incoordination, vague pains in the arms, legs, joints and abdomen. Sensory disturbances of extremities, paralysis of extensor muscles of arms and legs with wrist and foot drop. Disturbance of menstrual cycle, and abortion. Periods of stupor or lethargy, encephalopathy (with visual disturbances), elevated blood pressure, papilledema, cranial nerve paralysis delerium, convulsions and coma.
- 3.10 **Vapor (Gas) Irritant Characteristics:** Currently not available
- 3.11 **Liquid or Solid Characteristics:** Currently not available
- 3.12 **Odor Threshold:** Currently not available
- 3.13 **IDLH Value:** 100 mg Pb/m<sup>3</sup>
- 3.14 **OSHA PEL-TWA:** 0.05 mg/m<sup>3</sup> (as lead).
- 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:**  
>450°F O.C.
- 4.2 **Flammable Limits in Air:** Not flammable
- 4.3 **Fire Extinguishing Agents:** Chemical, foam, CO<sub>2</sub>, water (fog)
- 4.4 **Fire Extinguishing Agents Not to Be Used:** Currently not available
- 4.5 **Special Hazards of Combustion Products:** At high temperature toxic fumes are emitted.
- 4.6 **Behavior in Fire:** Possibility of explosion exists under dusty conditions
- 4.7 **Auto Ignition Temperature:** Currently not available
- 4.8 **Electrical Hazards:** Currently not available
- 4.9 **Burning Rate:** Currently not available
- 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:** No reaction
- 5.3 **Stability During Transport:** Stable
- 5.4 **Neutralizing Agents for Acids and Caustics:** Currently not available
- 5.5 **Polymerization:** Will not occur
- 5.6 **Inhibitor of Polymerization:** Not pertinent

### 6. WATER POLLUTION

- 6.1 **Aquatic Toxicity:**  
Lead stearate practically insoluble in water. The following are data for the lead ion.  
2.4 ppm/96-hour/TL<sub>m</sub>/Minnnow/soft water  
75 ppm/96-hour/TL<sub>m</sub>/Minnnow/hard water  
69 ppm/96-hour/TL<sub>m</sub>/Bluegill/hard water  
1.4 ppm/18-hour/lethal/Trout/soft water
- 6.2 **Waterfowl Toxicity:** Currently not available
- 6.3 **Biological Oxygen Demand (BOD):** Currently not available
- 6.4 **Food Chain Concentration Potential:** Fish and animal life are capable of lead concentration.
- 6.5 **GESAMP Hazard Profile:** Not listed

### 7. SHIPPING INFORMATION

- 7.1 **Grades of Purity:** 29.5% PbO
- 7.2 **Storage Temperature:** Cool
- 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:** No
- 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:** 774.17
- 9.3 **Boiling Point at 1 atm:** Currently not available
- 9.4 **Freezing Point:** 240.3°F = 115.7°C = 388.9°K
- 9.5 **Critical Temperature:** Currently not available
- 9.6 **Critical Pressure:** Currently not available
- 9.7 **Specific Gravity:** 1.34 - 1.4
- 9.8 **Liquid Surface Tension:** Not pertinent
- 9.9 **Liquid Water Interfacial Tension:** Not pertinent
- 9.10 **Vapor (Gas) Specific Gravity:** 26.7 (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:** Currently not available
- 9.14 **Heat of Decomposition:** Currently not available
- 9.15 **Heat of Solution:** Not pertinent
- 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
	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
96	0.050		C U R R E N T L Y		C U R R E N T L Y		C U R R E N T L Y
98	0.051						
100	0.052						
102	0.053						
104	0.053						
106	0.054						
108	0.055						
110	0.056						
112	0.056						
114	0.057						
116	0.058		N O T		N O T		N O T
118	0.059						
120	0.059						
122	0.060		A V A I L A B L E		A V A I L A B L E		A V A I L A B L E