LEAD SULFIDE

1. CORRECTIVE RESPONSE ACTIONS

1.1 Personal Protective Equipment: Protective clothing, rubber gloves, safety goggles, or face mask and an approved respirator.

1.2 Symptoms Following Exposure: INHALATION OR INGESTION: Abdominal pain, loss of appetite, weight loss, constipation, apathy or irritability, vomiting, fatigue, headache, weakness metallic taste and muscle incoordination. Lead line on gums. EYES: Irritation. May cause corneal destruction. SKIN: Pain and severe burns.

1.3 Treatment of Exposure: Call a doctor. INHALATION: Remove from exposure. EYES: Flush with running water. SKIN: Wash with soap and water. INGESTION: Gastric lavage if vomiting is not extensive. Give egg white or milk as demulcent.

1.4 TLV-TWA: 0.05 mg/m³ (as lead).

1.5 TLV-STEL: Not listed.

1.6 TVL-Ceiling: Not listed.

1.7 Toxicity by Ingestion: Grade 1; LD₅₀: 5-15 g/kg.

1.8 Toxicity by Inhalation: Currently not available.

1.9 Chronic Toxicity: Accumulative poison; repeated exposure can lead to damage to the liver, kidney, blood and nervous system. A suspected carcinogen of the lungs and kidney. Some evidence of teratogenic effects in laboratory animals.

1.10 Vapor (Gas) Irritant Characteristics: Not pertinent

1.11 Liquid or Solid Characteristics: Currently not available

1.12 Odor Threshold: Currently not available

1.13 IDLH Value: 100 mg Pb/m³

1.14 OSHA PEL-TWA: 0.05 mg/m³ (as lead).

1.15 OSHA PEL-STEL: Not listed.

1.16 OSHA PEL-Ceiling: Not listed.

1.17 EPA AEGL: Not listed

2. CHEMICAL DESIGNATIONS

2.1 CG Compatibility Group: Not listed.

2.2 Formula: PbS

2.3 IMO UN Designation: Not listed

2.4 DOT ID No.: 2291

2.5 CAS Registry No.: 1314-87-0

2.6 NAERG Guide No.: 151

2.7 Standard Industrial Trade Classification: 52342

3. HEALTH HAZARDS

3.1 Personal Protective Equipment: Protective clothing, rubber gloves, safety goggles, or face mask and an approved respirator.

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3.5 TLV-STEL: Not listed.

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3.10 Vapor (Gas) Irritant Characteristics: Not pertinent

3.11 Liquid or Solid Characteristics: Currently not available

3.12 Odor Threshold: Currently not available

3.13 IDLH Value: 100 mg Pb/m³

3.14 OSHA PEL-TWA: 0.05 mg/m³ (as lead).

3.15 OSHA PEL-STEL: Not listed.

3.16 OSHA PEL-Ceiling: Not listed.

3.17 EPA AEGL: Not listed

4. 4. FIRE HAZARDS

4.1 Flash Point: Not pertinent

4.2 Flammmable Limits in Air: Not flammable

4.3 Fire Extinguishing Agents: Use appropriate media to suppress exposure fire.

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: At fire temperatures emits highly toxic and irritating sulfur oxides.

4.7 Auto Ignition Temperature: Not pertinent

4.8 Electrical Hazards: Not pertinent

4.9 Burning Rate: Not pertinent

4.10 Atiabetic Flame Temperature: Currently not available

4.11 Stoichiometric Air to Fuel Ratio: Not pertinent.

4.12 Flame Temperature: Currently not available


4.14 Minimum Oxygen Concentration for Combustion (MOOC): 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: Not pertinent

5.5 Polymerization: Not pertinent

5.6 Inhibitor of Polymerization: Not pertinent

6. WATER POLLUTION

6.1 Aquatic Toxicity: > 1000 ppm/96 hr/fish/TL

6.2 Waterfowl Toxicity: Currently not available

6.3 Biological Oxygen Demand (BOD): Currently not available

6.4 Food Chain Concentration Potential: Positive, is concentrated in the food chain.

6.5 GESAMP Hazard Profile: Bioaccumulation: 0 Damage to living resources: 0 Human Oral hazard: 0 Human Contact hazard: 0 Reduction of amenities: 0

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 Class: 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 NPFA Hazard Classification: Not listed

8.6 EPA Reportable Quantity: 10 pounds

8.7 EPAL 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: 239.27

9.3 Boiling Point at 1 atm: 2337.2°F = 1281°C = 1554.2°K.

9.4 Freezing Point: 2037.2°F = 1114°C = 1387.2°K.

9.5 Critical Temperature: Not pertinent

9.6 Critical Pressure: Not pertinent

9.7 Specific Gravity: 7.5 at 20°C.

9.8 Liquid Surface Tension: Not pertinent

9.9 Viscosity: Currently not available

9.10 Vapor (Gas) Specific Gravity: 8.25 (calculated)

9.11 Ratio of Specific Heats of Vapor (Gas): Not pertinent

9.12 Latent Heat of Vaporization: Not pertinent

9.13 Heat of Combustion: Not pertinent

9.14 Heat of Decomposition: Not pertinent

9.15 Heat of Solution: Not pertinent

9.16 Heat of Polymerization: Not pertinent

9.17 Heat of Fusion: 17.3 cal/g

9.18 Limiting Value: Currently not available

9.19 Reid Vapor Pressure: Currently not available

NOTES

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LSU

CAUTIONARY RESPONSE INFORMATION

Common Synonyms

Galena
Plumbous sulfide

Solid, powder or crystal

Odor Threshold: 3.12

Idlhh Value: 3.9

Chronic Toxicity: 3.8

TOXICITY BY INHALATION: 3.3

Collection Systems: Pump; Dredge

Wear goggles, self-contained breathing apparatus, labor overclothing (including gloves). Notify local health and pollution control agencies.

Keep people away. AVOID CONTACT WITH POWDER OR DUST. Wear goggles, self-contained breathing apparatus, labor overclothing (including gloves). Notify local health and pollution control agencies.
# LEAD SULFIDE

## 9.20 SATURATED LIQUID DENSITY

<table>
<thead>
<tr>
<th>Temperature (degrees F)</th>
<th>Pounds per cubic foot</th>
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## 9.21 LIQUID HEAT CAPACITY

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## 9.22 LIQUID THERMAL CONDUCTIVITY

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<th>British thermal unit inch per hour-square foot-°F</th>
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## 9.23 LIQUID VISCOSITY

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## 9.24 SOLUBILITY IN WATER

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## 9.25 SATURATED VAPOR PRESSURE

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## 9.26 SATURATED VAPOR DENSITY

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## 9.27 IDEAL GAS HEAT CAPACITY

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JUNE 1999