### 1. CORRECTIVE RESPONSE ACTIONS

**Collection Systems:** Dredge

**Stop discharge**

**Pollution**

**Water**

- Notify local health and pollution control agencies.

**Exposure**

- Shut off ignition sources and call fire department.
- Keep people away.
- Notify operators of nearby water intakes.

- Notify local health and pollution control agencies.

- Notify operators of nearby water intakes.

### 2. CHEMICAL DESIGNATIONS

- **CAS Registry No.:** 7439-95-4
- **DOT ID No.:** 1418 (powder), 1869 (pellets)
- **IMO/UN Designation:** Not listed.
- **Class:** 4.1
- **Category:** Group E
- **UN Number:** 1869
- **Form:** Powder

### 3. HEALTH HAZARDS

**Personal Protective Equipment:** Eye protection

**Symptoms Following Exposure:** Dust irritates eyes in same way as any foreign material. Penetration of skin by fragments of metal is likely to produce local irritation, blisters, and ulcers which may become infected.

**Treatment of Exposure:** *EYES:* flush with water to remove dust. *SKIN:* treat as any puncture.

**TLV-STEL:** Not listed.

**Toxicity by Ingestion:** Oral LD₅₀ (lowest lethal dose) > 230 mg/kg (dog)

**Toxicity by Inhalation:** Currently not available.

**Chronic Toxicity:** Currently not available.

**Vapor (Gas) Irritant Characteristics:** Not pertinent

**Liquid or Solid Characteristics:** Currently not available.

**Odor Threshold:** Odorless

**IDLH Value:** Not listed.

**OSHA PEL-TWA:** Not listed.

**OSHA PEL-STEL:** Not listed.

**OSHA PEL-Ceiling:** Not listed.

**AHA AGI:** Not listed

### 4. FIRES HAZARDS

- **Flash Point:** Not pertinent (solid). Flammable when in the form of turnings or powder.
- **Flammable Limit in Air:** Not pertinent
- **Flame Extinguishing Agents:** Inert dry powders (e.g., graphite, limestone, salt)
- **Fire Extinguishing Agents Not to Be Used:** Water, foam, halogenated agents, carbon dioxide.
- **Special Hazards of Combustion:** Products: Not pertinent
- **Behavior in Fire:** Forms dense white smoke. Flame is very bright.
- **Ignition Temperature:** Not pertinent
- **Stoichiometric Air to Fuel Ratio:** 4.8 (calc.)
- **Combustion Molar Ratio (Reactant to Product):** 1.0 (calc.)
- **Minimum Oxygen Concentration for Combustion:** (MOCC): Not listed

### 5. CHEMICAL REACTIVITY

- **Reactivity with Water:** In finely divided form, reacts with water and acids to release flammable hydrogen gas.
- **Reactivity with Common Materials:** No reaction
- **Stability During Transport:** Stable
- **Neutralizing Agents for Acids and Caustics:** Not pertinent
- **Polymerization:** Not pertinent
- **Inhibitor of Polymerization:** Not pertinent

### 6. WATER POLLUTION

- **Aquatic Toxicity:** None
- **Waterfowl Toxicity:** None
- **Biological Oxygen Demand (BOD):** None
- **Food Chain Concentration Potential:** None
- **GESAMP Hazard Profile:** Not listed

### 7. SHIPPING INFORMATION

- **Grades of Purity:** Pigs, ingots, turnings, sticks; all high purity.
- **Storage Temperature:** Ambient
- **Inert Atmosphere:** No requirement
- **Venting:** Open (flame arrester)

### 8. HAZARD CLASSIFICATIONS

- **49 CFR Category:** Dangerous When Wet

### 9. PHYSICAL & CHEMICAL PROPERTIES

- **Physical State at 15° C and 1 atm:** Solid
- **Molecular Weight:** 24.3
- **Boiling Point at 1 atm:** 2,012°F = 1,100°C = 1,373 K
- **Freezing Point:** 1,202°F = 650°C = 923 K
- **Critical Temperature:** Not pertinent
- **Critical Pressure:** Not pertinent
- **Specific Gravity:** Not pertinent
- **Liquid Surface Tension:** Not pertinent
- **Water Interfacial Tension:** Not pertinent
- **Vapor (Gas) Specific Gravity:** Not pertinent
- **Ratio of Specific Heats of Vapor (Gas):** Not pertinent
- **Latent Heat of Vaporization:** Not pertinent
- **Heat of Combustion:** –11,950 Btu/lb = –4,600 cal/g = –278 X 10³ J/kg
- **Heat of Deposition:** Not pertinent
- **Heat of Solution:** Not pertinent
- **Heat of Polymerization:** Not pertinent
- **Heat of Fusion:** 88.9 cal/g

### NOTES

- **EPA FWPCA List:** Not listed
- **RCRA Waste Number:** Not listed
- **EPA Reportable Quantity:** Not listed
- **EPA Pollution Category:** Not listed
- **Hazardous Waste Number:** Not listed
- **Inert Dry Powder:** Not pertinent
- **Release Flammable Hydrogen Gas:** Not pertinent
- **Smoke:** Flame is very bright.
- **Products:** Powder (e.g., graphite, limestone, salt)
- **Fumes:** Flammable
- **Harmful if swallowed:** Not listed
- **Flammable (Red):** Not pertinent
- **Flammability (Red):** Not pertinent
- **Instability (Yellow):** Not pertinent
- **Stability (Green):** Not pertinent
- **Inert Dry Powder:** Not pertinent
- **Reactivity (Red):** Not pertinent
- **Hazardous Waste (Red):** Not pertinent
<table>
<thead>
<tr>
<th>9.20 SATURATED LIQUID DENSITY</th>
<th>9.21 LIQUID HEAT CAPACITY</th>
<th>9.22 LIQUID THERMAL CONDUCTIVITY</th>
<th>9.23 LIQUID VISCOSITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature (degrees F)</td>
<td>Pounds per cubic foot</td>
<td>Temperature (degrees F)</td>
<td>British thermal unit per pound-F</td>
</tr>
<tr>
<td>NOT</td>
<td>NOT</td>
<td>NOT</td>
<td>NOT</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>9.24 SOLUBILITY IN WATER</th>
<th>9.25 SATURATED VAPOR PRESSURE</th>
<th>9.26 SATURATED VAPOR DENSITY</th>
<th>9.27 IDEAL GAS HEAT CAPACITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature (degrees F)</td>
<td>Pounds per 100 pounds of water</td>
<td>Temperature (degrees F)</td>
<td>Pounds per square inch</td>
</tr>
<tr>
<td>IN SOLUBLE</td>
<td>NOT</td>
<td>NOT</td>
<td>NOT</td>
</tr>
</tbody>
</table>