**1. CORRECTIVE RESPONSE ACTIONS**

**Fire**
- FLAMMABLE: Extinguish with dry graphite, soda ash, or other inert powder. Do not use water, foam, carbon dioxide or vaporizing liquids on fire.

**Exposure**
- Call for medical aid.
- SOLID: Will bum skin and 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.

**Water**
- Dangerous to aquatic life in high concentrations. May be dangerous if it enters water intakes. Notify local health and wildlife officials. Notify operators of nearby water intakes.

**Pollution**
- Collection Systems: Pump, Dredge
- Stop discharge
- Protect water intakes.
- Notify local health and pollution control agencies.
- Keep people away. Avoid contact with solid and dust.

**2. CHEMICAL DESIGNATIONS**

**3. HEALTH HAZARDS**

**3.1** Personal Protective Equipment: Goggles and rubber gloves.

**3.2** Symptoms Following Exposure: Contact with eyes or skin produces caustic burns.

**3.3** Treatment of Exposure: Flush with water

**3.4** TLV-TWA: Not listed.

**3.5** TLV-CEILING: Not listed.

**3.6** LD-50: Not listed.

**4. FIRE HAZARDS**

**4.1** Flash Point: Not pertinent (flammable solid)

**4.2** Flammable Limits in Air: Not pertinent

**4.3** Fire Extinguishing Agents: Dry graphite, soda ash, powdered sodium chloride, or appropriate metal fire extinguishing dry powder.

**4.4** Fire Extinguishing Agents Not to Be Used: Water, halogenated hydrocarbons, dry chemical, carbon dioxide, foam

**4.5** Special Hazards of Combustion Products: Not pertinent

**4.6** Behavior in Fire: Burns violently, especially if finely divided.

**4.7** Auto Ignition Temperature: 1454°F – 18°F

**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: 2.4 (calc.)

**4.12** Flame Temperature: Currently not available

**4.13** Combustion Molar Ratio (Reactant to Product): 1.0 (calc.)

**4.14** Minimum Oxygen Concentration for Combustion (MOOC): Not listed

**5. CHEMICAL REACTIVITY**

**5.1** Reactivity with Water: Reacts to form flammable hydrocarbon gas, which may ignite. The reaction is not violent.

**5.2** Reactivity with Common Materials: Reacts with moist air to form skin of hydroxide. The reaction is not hazardous.

**5.3** Stability During Transport: Stable

**5.4** Neutralizing Agents for Acids and Caustics: Flush with water

**5.5** Polymerization: Stable

**5.6** Inhibitor of Polymerization: Stable

**6. WATER POLLUTION**

**6.1** Aquatic Toxicity: See Calcium hydroxide (CAH)

**6.2** Waterfront Toxicity: See Calcium hydroxide (CAH)

**6.3** Biological Oxygen Demand (BOD): None

**6.4** Food Chain Concentration Potential: None

**6.5** GESAMP Hazard Profile: Not listed

**7. SHIPPING INFORMATION**

**7.1** Grades of Purity: Commercial; 99.5%; reagent grade 99.9%

**7.2** Storage Temperature: Ambient

**7.3** Inert Atmosphere: No requirement

**7.4** Venting: Sealed containers must be in a ventilated area.

**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: Dangerous When Wet

**8.2** 49 CFR Class: 4.3

**8.3** 49 CFR Package Group: II

**8.4** Marine Pollutant: No

**8.5** NPPA Hazard Classification:

<table>
<thead>
<tr>
<th>Category</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Hazard (Blue)</td>
<td>1</td>
</tr>
<tr>
<td>Flammability (Red)</td>
<td>1</td>
</tr>
<tr>
<td>Instability (Yellow)</td>
<td>2</td>
</tr>
<tr>
<td>Special (White)</td>
<td>1</td>
</tr>
</tbody>
</table>

**8.6** EPA Reportable Quantity: Not listed

**8.7** EPA Pollution Category: Not listed

**8.8** RCRA Waste Number: Not listed

**8.9** EPA FWPCA List: Not listed

**9. PHYSICAL & CHEMICAL PROPERTIES**

**9.1** Physical State at 15°C and 1 atm: Solid

**9.2** Molecular Weight: 40.1

**9.3** Boiling Point at 1 atm: 2,714°F = 1,490°C = 1,787 K

**9.4** Freezing Point: 1,562°F = 850°C = 1,123 K

**9.5** Critical Temperature: Not pertinent

**9.6** Critical Pressure: Not pertinent

**9.7** Specific Gravity: 1.55 at 20°C (solid)

**9.8** Liquid Surface Tension: Not pertinent

**9.9** Liquid Water Interface Tension: Not pertinent

**9.10** Vapor (Gas) Specific Gravity: Not pertinent

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

**9.12** Latent Heat of Vaporization: Not pertinent

**9.13** Heat of Combustion: –570 Btu/lb = –3,770 cal/g = –158 X 10³ J/kg

**9.14** Heat of Decomposition: None

**9.15** Heat of Solution: Not pertinent

**9.16** Heat of Polymerization: Not pertinent

**9.17** Heat of Fusion: 55.7 cal/g

**9.18** Limiting Values: Currently not available

**9.19** Reid Vapor Pressure: Currently not available

**NOTES**
### CALCIUM

<table>
<thead>
<tr>
<th>9.20</th>
<th>SATURATED LIQUID DENSITY</th>
<th>Temperature (degrees F)</th>
<th>Pounds per cubic foot</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOT</td>
<td>PERTINENT</td>
<td>NOT</td>
<td>PERTINENT</td>
</tr>
<tr>
<td>9.21</td>
<td>LIQUID HEAT CAPACITY</td>
<td>Temperature (degrees F)</td>
<td>British thermal unit per pound-F</td>
</tr>
<tr>
<td>NOT</td>
<td>PERTINENT</td>
<td>NOT</td>
<td>PERTINENT</td>
</tr>
<tr>
<td>9.22</td>
<td>LIQUID THERMAL CONDUCTIVITY</td>
<td>Temperature (degrees F)</td>
<td>British thermal unit inch per hour-square foot-F</td>
</tr>
<tr>
<td>NOT</td>
<td>PERTINENT</td>
<td>NOT</td>
<td>PERTINENT</td>
</tr>
<tr>
<td>9.23</td>
<td>LIQUID VISCOSITY</td>
<td>Temperature (degrees F)</td>
<td>Centipoise</td>
</tr>
<tr>
<td>NOT</td>
<td>PERTINENT</td>
<td>NOT</td>
<td>PERTINENT</td>
</tr>
</tbody>
</table>

| 9.24  | SOLUBILITY IN WATER      | Temperature (degrees F) | Pounds per 100 pounds of water |
| REACTS|                           |                         | REACTS                  |
| 9.25  | SATURATED VAPOR PRESSURE | Temperature (degrees F) | Pounds per square inch     |
| NOT   | PERTINENT                 | NOT                     | PERTINENT             |
| 9.26  | SATURATED VAPOR DENSITY  | Temperature (degrees F) | Pounds per cubic foot      |
| NOT   | PERTINENT                 | NOT                     | PERTINENT             |
| 9.27  | IDEAL GAS HEAT CAPACITY  | Temperature (degrees F) | British thermal unit per pound-F |
| NOT   | PERTINENT                 | NOT                     | PERTINENT             |

JUNE 1999