## Nickel Acetate

### CAUTIONARY RESPONSE INFORMATION

<table>
<thead>
<tr>
<th>Common Synonyms</th>
<th>Solid</th>
<th>Dull</th>
<th>Odorless</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid, nickel (II) salt</td>
<td>Dull green</td>
<td>Odorless</td>
<td></td>
</tr>
<tr>
<td>Nickel acetate tetrahydrate</td>
<td>Dull green</td>
<td>Odorless</td>
<td></td>
</tr>
</tbody>
</table>

**Keep people away. Avoid contact with solid and dust.** Notify local health and pollution control agencies. Protect water intakes.

### FIRE

- **Exposure**
  - CALL FOR MEDICAL AID.
  - DUST
    - Irritating to eyes, nose and throat.
    - If inhaled will cause coughing or difficulty breathing.
    - If in eyes, hold eyelids open and flush with plenty of water.
    - If breathing has stopped, give artificial respiration.
  - SOLID
    - Irritating to skin and eyes.
    - If swallowed will cause nausea and vomiting.
    - If inhaled, hold eyelids open and flush with plenty of water.
    - If SWALLOWED and victim is CONSCIOUS, have victim drink water or milk.
    - IF SWALLOWED and victim is UNCONSCIOUS OR HAVING CONVULSIONS, do nothing except keep victim warm.

- **Water Pollution**
  - Effect of low concentrations on aquatic life is unknown.
  - May be dangerous if it enters water intakes.
  - Notify local health and wildlife officials.

### 1. CORRECTIVE RESPONSE ACTIONS

- Dilute and disperse
- Stop discharge

### 2. CHEMICAL DESIGNATIONS

- **1.74 at 20°C (solid)**
- **517.2k**

### 3. HEALTH HAZARDS

- **3.1 Personal Protective Equipment:** Bu. Mines approved respirator; rubber gloves; safety goggles; protective clothing.
- **3.2 Symptoms Following Exposures:** Inhalation causes irritation of nose and throat. Ingestion causes vomiting. Contact with eyes causes irritation. May cause dermatitis in contact with skin.
- **3.3 Treatment of Exposure:** INHALATION: remove to fresh air; get medical attention if exposure has been severe. INGESTION: give large amount of water. EYES: flush with water 15 min.; consult physician if ingestion persists. SKIN: wash with soap and water.
- **3.4 TLV-TWA:** Notice of intended change: 1.5 mg/l (solid)
- **3.5 TLV-STEL:** Not listed.
- **3.6 TLV-Ceiling:** Not listed.
- **3.7 Toxicity by Ingestion:** Grade 2; LD₅₀ ≥ 0.5-5g/kg
- **3.8 Toxicity by Inhalation:** Currently not available.
- **3.9 Chronic Toxicity:** Pathological changes.
- **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:** 10 mg/Nm³
- **3.14 OSHA PEL-TWA:** 1 mg/m³ as nickel
- **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:** Not flammable.
- **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: Currently not available.
- **4.6 Behavior in Fire:** Currently not available.
- **4.7 Auto Ignition Temperature:** Not pertinent.
- **4.8 Electrical Hazards:** Not pertinent.
- **4.9 Ignition Rate:** Not pertinent.
- **4.10 Adiabatic Flame Temperature:** Currently not available.
- **4.11 Stoichiometric Air to Fuel Ratios:** 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:** 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:** Currently not available.
- **6.2 Water/BioToxicity:** Currently not available.
- **6.3 Biological Oxygen Demand (BOD):** Currently not available.
- **6.4 Food Chain Concentration Potential:** None.
- **6.5 GESAMP Hazard Profile:** Not listed.

### 7. SHIPPING INFORMATION

- **7.1 Grades of Purity:** Commercial; 99%; Reagent.
- **7.2 Storage Temperature:** Ambient.
- **7.3 Inert Atmosphere:** No requirement.
- **7.4 Vents:** Open.
- **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:** Not listed.
- **8.2 49 CFR Class:** Not pertinent.
- **8.3 49 CFR Package Group:** Not listed.
- **8.4 Marine Pollution:** Not pertinent.
- **8.5 NFPA Hazard Classification:** Not listed.
- **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:** 248.86.
- **9.3 Boiling Point:** Not pertinent at 1 atm (decomposes).
- **9.4 Freezing Point:** Not pertinent.
- **9.5 Critical Temperature:** Not pertinent.
- **9.6 Critical Pressure:** Not pertinent.
- **9.7 Specific Gravity:** 1.74 at 20°C (solid).
- **9.8 Liquid Surface Tension:** Not pertinent.
- **9.9 Liquid Water Interfacial 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:** 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:** Currently not available.
- **9.18 Limiting Value:** Currently not available.
- **9.19 Reid Vapor Pressure:** Currently not available.

### NOTES

- **9.19.1 EPA FWPCA List:** Not listed.

### JUNE 1999
## Nickel Acetate

### Table 9.20
**Saturated Liquid Density**

<table>
<thead>
<tr>
<th>Temperature (degrees F)</th>
<th>Pounds per cubic foot</th>
</tr>
</thead>
<tbody>
<tr>
<td>68</td>
<td>17.000</td>
</tr>
</tbody>
</table>

### Table 9.21
**Liquid Heat Capacity**

<table>
<thead>
<tr>
<th>Temperature (degrees F)</th>
<th>British thermal unit per pound-F</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOT</td>
<td></td>
</tr>
</tbody>
</table>

### Table 9.22
**Liquid Thermal Conductivity**

<table>
<thead>
<tr>
<th>Temperature (degrees F)</th>
<th>British thermal unit inch per hour-square foot-F</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOT</td>
<td></td>
</tr>
</tbody>
</table>

### Table 9.23
**Liquid Viscosity**

<table>
<thead>
<tr>
<th>Temperature (degrees F)</th>
<th>Centipoise</th>
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</thead>
<tbody>
<tr>
<td>NOT</td>
<td></td>
</tr>
</tbody>
</table>

### Table 9.24
**Solubility in Water**

<table>
<thead>
<tr>
<th>Temperature (degrees F)</th>
<th>Pounds per 100 pounds of water</th>
</tr>
</thead>
<tbody>
<tr>
<td>68</td>
<td>17.000</td>
</tr>
</tbody>
</table>

### Table 9.25
**Saturated Vapor Pressure**

<table>
<thead>
<tr>
<th>Temperature (degrees F)</th>
<th>Pounds per square inch</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOT</td>
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</tr>
</tbody>
</table>

### Table 9.26
**Saturated Vapor Density**

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<tr>
<th>Temperature (degrees F)</th>
<th>Pounds per cubic foot</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOT</td>
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</table>

### Table 9.27
**Ideal Gas Heat Capacity**

<table>
<thead>
<tr>
<th>Temperature (degrees F)</th>
<th>British thermal unit per pound-F</th>
</tr>
</thead>
<tbody>
<tr>
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**JUNE 1999**