Section 1 - Chemical Product and Company Identification

**MSDS Name:**
Cobaltous chloride, hexahydrate, ACS

**Catalog Numbers:**
LC13190

**Synonyms:**
Cobaltous chloride hexahydrate; Cobalt muriate hexahydrate.

**Company Identification:**
LabChem, Inc.
200 William Pitt Way
Pittsburgh, PA 15238

**Company Phone Number:**
(412) 826-5230

**Emergency Phone Number:**
(800) 424-9300

**CHEMTREC Phone Number:**
(800) 424-9300

Section 2 - Composition, Information on Ingredients

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name:</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>7791-13-1</td>
<td>Cobalt(II) chloride hexahydrate</td>
<td>100</td>
</tr>
</tbody>
</table>

Section 3 - Hazards Identification

**Emergency Overview**

**Appearance:** Reddish-purple solid

**Warning:** May cause asthma. Causes eye, skin, and respiratory tract irritation. May cause allergic skin reaction. May be harmful if swallowed. May cause blood abnormalities. May cause lung damage. May cause cancer based on animal studies. Potential cancer hazard. Dangerous for the environment.

**Target Organs:** Lungs, cardiovascular system, red blood cells, skin.

**Potential Health Effects**

**Eye:**
Causes eye irritation.

**Skin:**
Prolonged and/or repeated contact may cause irritation and/or dermatitis. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material.

**Ingestion:**
May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May interfere with blood clotting. May cause thyroid abnormalities.
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Inhalation:
Causes delayed lung injury. Causes respiratory tract irritation. May cause asthmatic attacks due to allergic sensitization of the respiratory tract. May cause asthma and shortness of breath.

Chronic:
Cobalt compounds may cause cancer based upon animal studies.

Section 4 - First Aid Measures

Eyes:
Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin:
Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion:
Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation:
Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation.

Notes to Physician:
Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information:
As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Non-combustible, substance itself does not burn but may decompose upon heating to produce irritating, corrosive and/or toxic fumes.

Extinguishing Media:
Substance is noncombustible; use agent most appropriate to extinguish surrounding fire.

Autoignition Temperature:
Not available.

Flash Point:
None.

NFPA Rating:
H-2; F-0; I-0

Explosion Limits:
Lower: n/a Upper: n/a

Section 6 - Accidental Release Measures

General Information:
Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks:
Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation.

Section 7 - Handling and Storage

Handling:
Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with skin and eyes. Keep container tightly closed. Avoid ingestion and inhalation.

Storage:
Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:
Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cobaltous chloride</td>
<td>0.02 mg/m3 TWA (as Co) (listed under Cobalt, inorganic compounds)</td>
<td>none listed</td>
<td>none listed</td>
</tr>
</tbody>
</table>

OSHA Vacated PELs:
Cobalt (II) chloride hexahydrate: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes:
Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin:
Wear appropriate gloves to prevent skin exposure.

Clothing:
Wear appropriate protective clothing to prevent skin exposure.

Respirators:
Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Color</th>
<th>Odor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crystals</td>
<td>Reddish-purple</td>
<td>None</td>
</tr>
</tbody>
</table>
Material Safety Data Sheet
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- pH: 4.6 (1 M solution)
- Vapor Pressure: Negligible
- Vapor Density: Not available
- Evaporation Rate: Negligible
- Viscosity: Not available
- Boiling Point: 1049 °C (1920 °F)
- Freezing/Melting Point: 87 °C (189 °F)
- Decomposition Temperature: 110 °C (230 °F)
- Solubility in water: 77 g/ 100mL (0 °C)
- Specific Gravity/Density: 1.924
- Molecular Formula: CoCl₂·6H₂O
- Molecular Weight: 237.92

Section 10 - Stability and Reactivity

Chemical Stability:
Stable at room temperature in closed containers under normal storage and handling conditions.

Conditions to Avoid:
- Dust generation, moisture, excess heat.

Incompatibilities with Other Materials:
- Strong oxidizers and alkali metals. Absorbs NH₃ from air.

Hazardous Decomposition Products:
- Hydrogen chloride, irritating and toxic fumes and gases, cobalt and cobalt oxides.

Hazardous Polymerization:
- Has not been reported.

Section 11 - Toxicological Information

RTECS:
- CAS# 7791-13-1: GG0200000

LD₅₀/LC₅₀:
- CAS# 7791-13-1:
  - Oral, rat: LD₅₀ = 766 mg/kg;
  - Skin, rat: LD₅₀ = >2 gm/kg

Carcinogenicity:
- CAS# 7791-13-1:
  - ACGIH: A3 – Confirmed animal carcinogen with unknown relevance to humans (listed as “Cobalt, inorganic compounds”)
  - IARC: Group 2B Carcinogen
  - Not listed by NTP or California Prop 65.

Epidemiology:
- IARC Group 2B: Proven animal carcinogenic substance of potential relevance to humans. IARC Group 2B: No data available on human carcinogenicity, however sufficient evidence of carcinogenicity in animals.

Teratogenicity:
- No information found.

Reproductive:
- No information found.
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Mutagenicity:
No information found.

Neurotoxicity:
No information found.

Section 12 - Ecological Information

No information found.

Section 13 - Disposal Considerations

Dispose of in accordance with Federal, State, and local regulations.

Section 14 - Transport Information

US DOT
Shipping Name: Corrosive solid, acidic, inorganic, n.o.s.
Hazard Class: 8
UN Number: UN3260
Packing Group: III

Section 15 - Regulatory Information

US Federal
TSCA:
CAS# 7791-13-1 is not listed on the TSCA inventory because it is a hydrate. It is considered to be on the list if the anhydrous form is listed.
CAS# 7646-79-9 is listed on the TSCA inventory.

SARA Reportable Quantities (RQ):
None of the components have a RQ.

CERCLA/SARA Section 313:
This material contains Cobalt (II) chloride hexahydrate (listed as Cobalt compounds), 100%, (CAS# 7791-13-1) which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

OSHA - Highly Hazardous:
None of the components are on this list.

US State
State Right to Know:
CAS# 7791-13-1 can be found on the following state right to know lists: Pennsylvania, (listed as Cobalt compounds), and Minnesota, (listed as Cobalt, inorganic compounds).

California Regulations:
None of the chemicals in this product are listed.
European/International Regulations

**Canadian DSL/NDSL:**
CAS# 7791-13-1 is not listed on Canada’s DSL List.

**Canada Ingredient Disclosure List:**
CAS# 7791-13-1 is not listed on the Canadian Ingredient Disclosure List.

Section 16 - Other Information

MSDS Creation Date: November 16, 2006
Revision Date: None

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