



LTS Research Laboratories, Inc.  
Safety Data Sheet  
Cobalt (II) hydroxide

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1. Product and Company Identification

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Trade Name:	Cobalt (II) hydroxide
Chemical Formula:	Co(OH) <sub>2</sub>
Recommended Use:	Scientific research and development
Manufacturer/Supplier:	LTS Research Laboratories, Inc.
Street:	37 Ramland Road
City:	Orangeburg
State:	New York
Zip Code:	10962
Country:	USA
Tel #:	855-587-2436 / 855-lts-chem
24-Hour Emergency Contact:	800-424-9300 (US & Canada) +1-703-527-3887 (International)



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## 2. Hazards Identification

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Signal Word:

Danger



Hazard Statements:

H302+H332: Harmful if swallowed or if inhaled  
H317: May cause an allergic skin reaction.  
H319: Causes serious eye irritation.  
H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H351: Suspected of causing cancer.  
H410: Very toxic to aquatic life with long lasting effects.

Precautionary Statements:

P201: Obtain special instructions before use.  
P202: Do not handle until all safety precautions have been read and understood.  
P261: Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.  
P264: Wash skin thoroughly after handling.  
P270: Do not eat, drink or smoke when using this product.  
P271: Use only outdoors or in a well-ventilated area.  
P272: Contaminated work clothing should not be allowed out of the workplace.  
P273: Avoid release to the environment.  
P280: Wear protective gloves/ protective clothing/ eye protection/ face protection.  
P285: In case of inadequate ventilation wear respiratory protection.  
P301+P312+P330: IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.  
P302+P352: IF ON SKIN: Wash with plenty of soap and water.  
P304+P340+P312: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.  
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P308+P313: IF exposed or concerned: Get medical advice/ attention.  
P333+P313: If skin irritation or rash occurs: Get medical advice/ attention.  
P337+P313: If eye irritation persists: Get medical advice/ attention.  
P363: Wash contaminated clothing before reuse.  
P391: Collect spillage.  
P405: Store locked up  
P501: Dispose of contents/container in accordance with local/regional/national/international regulations

HMIS Health Ratings (0-4):

Health:	2
Flammability:	0
Physical:	1

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### 3. Composition

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Chemical Family: Inorganic Compound  
Additional Names: N/A

Cobalt (II) hydroxide (Co(OH)<sub>2</sub>):  
Percentage: 100 wt%  
CAS #: 21041-93-0  
EC #: 244-166-4

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### 4. First Aid Procedures

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General Treatment: Seek medical attention if symptoms persist.  
Special Treatment: None  
Important Symptoms: None

Inhalation: Remove victim to fresh air. Supply oxygen if breathing is difficult. Keep patient warm. Seek immediate medical attention.  
Ingestion: Seek immediate medical attention.  
Skin: Immediately wash affected area with mild soap and water. Remove any contaminated clothing. Seek immediate medical attention.  
Eyes: Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek immediate medical attention.

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### 5. Firefighting Measures

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Flammability: Non-flammable  
Extinguishing Media: No special restrictions – use suitable extinguishing agent for surrounding material and type of fire.  
Spec. Fire Fighting Procedure: Use full-face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. See section 10 for decomposition products.

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### 6. Accidental Release Measures

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If Material Is Released/Spilled: Wear appropriate respiratory and protective equipment specified in special protection information. Keep unprotected persons away. Isolate spill area and provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for disposal. Take care not to raise dust.  
Environmental Precautions: Isolate runoff to prevent environmental pollution.

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### 7. Handling and Storage

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Handling Conditions: Handle under dry protective gas. Avoid contact with skin and eyes. Wash thoroughly after handling.  
Storage Conditions: Store in a cool dry place in a tightly sealed container. Store away from air, oxidizing agents. Store under inert gas. This product is air sensitive. Store apart from materials and conditions listed in section 10.  
Work/Hygienic Maintenance: Do not use tobacco or food in work area. Wash thoroughly before eating and smoking. Do not blow dust off clothing or skin with compressed air.  
Ventilation: Provide sufficient ventilation to maintain concentration at or below threshold limit.

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## 8. Exposure Controls and Personal Protection

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Permissible Exposure Limits:	0.1 mg/m <sup>3</sup> as Co, short-term value
Threshold Limit Value:	0.02 mg/m <sup>3</sup> as Co, long-term value
Special Equipment:	Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.
Respiratory Protection:	Dust Respirator
Protective Gloves:	Rubber gloves
Eye Protection:	Safety glasses or goggles
Body Protection:	Protective work clothing. Wear close-toed shoes and long sleeves/pants.

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## 9. Physical and Chemical Characteristics

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Color	Pink
Form:	Powder
Odor:	Odorless
Water Solubility:	Insoluble
Boiling Point:	N/A
Melting Point:	250°C
Flash Point:	N/A
Autoignition Temperature:	N/A
Density:	3.597 g/cc
Molecular weight:	92.95 g/mol

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## 10. Reactivity

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Stability:	Stable under recommended storage conditions
Reacts With:	Oxidizing agents
Incompatible Conditions:	Air, water/moisture
Hazardous Decomposition Products:	Metal oxide fume, cobalt oxides

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## 11. Toxicological Information

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Potential Health Effects:	
Eyes:	Causes serious eye irritation.
Skin:	May cause an allergic skin reaction
Ingestion:	Harmful if swallowed
Inhalation:	Harmful if inhaled
Chronic:	N/A
Signs & Symptoms:	N/A
Aggravated Medical Conditions:	N/A
Median Lethal Dose:	1,060 mg/kg for rat by mouth
Carcinogen:	IARC-2B: Possibly carcinogenic to humans: limited evidence in humans in the absence of sufficient evidence in experimental animals. ACGIH A3: Animal carcinogen: Agent is carcinogenic in experimental animals at relatively high dose, by route(s) of administration, at site(s), of histologic type(s) or by mechanism(s) not considered relevant to worker exposure. Available epidemiologic studies do not confirm an increased risk of cancer in exposed humans. Available evidence suggests that the agent is not likely to cause cancer in humans except under uncommon or unlikely routes or levels of exposure.

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## 12. Ecological Information

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Aquatic Toxicity: N/A  
Persistent Bioaccumulation Toxicity: N/A  
Very Persistent, Very Bioaccumulative: N/A  
Notes: Do not allow product to reach ground water, water course or sewage system.  
Avoid transfer into the environment.

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## 13. Disposal Considerations

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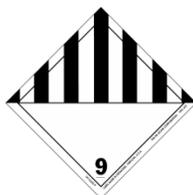
Dispose of in accordance with local, state, national, and international regulations.

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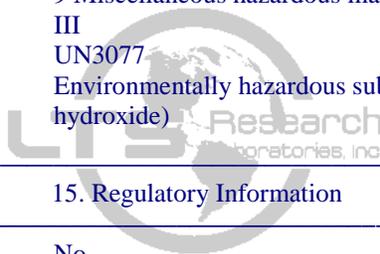
## 14. Transportation Data

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Hazardous: Hazardous as powder only.



Hazard Class: 9 Miscellaneous hazardous materials and articles  
Packing Group: III  
UN Number: UN3077  
Proper Shipping Name: Environmentally hazardous substance, solid, n.o.s. (Cobalt (II) hydroxide)



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## 15. Regulatory Information

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Sec 302 Extremely Hazardous: No  
Sec 304 Reportable Quantities: N/A  
Sec 313 Toxic Chemicals: Yes

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## 16. Other Information

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This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.

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