



LTS Research Laboratories, Inc.  
Safety Data Sheet  
Cobalt carbonyl

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1. Product and Company Identification

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Trade Name: Cobalt carbonyl  
Chemical Formula:  $\text{Co}_2(\text{CO})_8$   
Recommended Use: Scientific research and development

Manufacturer/Supplier: LTS Research Laboratories, Inc.  
Street: 2001 Oaks Pkwy  
City: Belmont  
State: North Carolina  
Zip Code: 28012  
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:

H251: Self-heating; may catch fire  
H302: Harmful if swallowed  
H315: Causes skin irritation  
H317: May cause an allergic skin reaction  
H330: Fatal if inhaled  
H351: Suspected of causing cancer  
H361: Suspected of damaging fertility or the unborn child  
H373: May cause damage to organs (Nervous system) through prolonged or repeated exposure if inhaled  
H412: Harmful to aquatic life with long lasting effects

Precautionary Statements:

P202: Do not handle until all safety precautions have been read and understood  
P235 + P410: Keep cool. Protect from sunlight  
P260: Do not breathe 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 must not be allowed out of the workplace  
P273: Avoid release to the environment  
P280: Wear protective gloves/ protective clothing/ eye protection/ face protection  
P284: Wear respiratory protection.  
P301 + P312 + P330: IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth  
P302 + P352: IF ON SKIN: Wash with plenty of soap and water  
P304 + P340 + P310: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor

P308 + P313: IF exposed or concerned: Get medical advice/ attention  
P333 + P313: If skin irritation or rash occurs: Get medical advice/ attention  
P362: Take off contaminated clothing and wash before reuse  
P403 + P233: Store in a well-ventilated place. Keep container tightly closed  
P403 + P235: Store in a well-ventilated place. Keep cool  
P405: Store locked up  
P407: Maintain air gap between stacks/ pallets  
P420: Store away from other materials  
P501: Dispose of contents/container in accordance with local/regional/national/international regulations

HMIS Health Ratings (0-4):

Health:	N/A
Flammability:	N/A
Physical:	N/A

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### 3. Composition

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Chemical Family:	Organometallic
Additional Names:	Dicobalt Octacarbonyl

Cobalt carbonyl (Co<sub>2</sub>(CO)<sub>8</sub>)

Percentage:	100 wt%
CAS #:	10210-68-1
EC #:	233-514-0

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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:	N/A

Inhalation: Remove victim to fresh air. Supply oxygen if breathing is difficult. Seek medical attention.

Ingestion: Rinse mouth with water. Do not induce vomiting. Seek medical attention.

Skin: Wash affected area with mild soap and water. Remove any contaminated clothing. Seek medical attention.

Eyes: Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek medical attention.

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### 5. Firefighting Measures

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Flammability:	Flammable
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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. 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:	Wash thoroughly after handling.
Storage Conditions:	Store in a cool dry place in a tightly sealed container. 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:	N/A
Threshold Limit Value:	0.1 mg/m <sup>3</sup> as Co <sub>2</sub> (CO) <sub>8</sub> , long-term value
Special Equipment:	None
Respiratory Protection:	Dust Respirator
Protective Gloves:	Rubber gloves Check gloves prior to each use
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	Dark red
Form:	Crystalline Pieces, Custom parts
Odor:	N/A
Water Solubility:	N/A
Boiling Point:	N/A
Melting Point:	N/A
Flash Point:	-23 °C
Autoignition Temperature:	N/A
Density:	N/A
Molecular weight:	341.95 g/mol

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## 10. Reactivity

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Stability:	Stable under recommended storage conditions
Reacts With:	Oxidizing agents
Incompatible Conditions:	None
Hazardous Decomposition Products:	Carbon oxides, Cobalt/cobalt oxides

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## 11. Toxicological Information

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Potential Health Effects:

Eyes:	May cause irritation
Skin:	Causes skin irritation
Ingestion:	Harmful if swallowed
Inhalation:	Fatal if inhaled
Chronic:	N/A

Signs & Symptoms: N/A

Aggravated Medical Conditions: N/A

Median Lethal Dose: N/A

Carcinogen: Evidence of a carcinogenic effect.

IARC: No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens

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## 12. Ecological Information

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Aquatic Toxicity: Harmful to aquatic life with long lasting effects

Persistent Bioaccumulation Toxicity: N/A

Very Persistent, Very Bioaccumulative: N/A

Notes: N/A

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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 for transportation.



Hazard Class: 4.2 Spontaneously combustible

Packing Group: PGII

UN Number: UN 3190

Proper Shipping Name: Self-heating solid, inorganic, n.o.s. (di-Cobalt octacarbonyl)

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## 15. Regulatory Information

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Sec 302 Extremely Hazardous: Yes

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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