

# MATERIAL SAFETY DATA SHEET

Manufacturer: Strem Chemicals, Inc  
 7 Mulliken Way  
 Newburyport, MA 01950-4098 U.S.A.  
 www.strem.com

Strem Customer Service (978) 499-1600  
 CHEMTREC (Emergency Only) (800) 424-9300  
 Poison Center (800) 562-8236

<b>Section 1: Product Identification</b>	
Chemical Name:	Cobalt carbonyl (Dicobalt octacarbonyl) (Stabilized with 1-5% hexanes)
Product Number:	27-0400
CAS Registry Number:	10210-68-1
Formula:	Co <sub>2</sub> (CO) <sub>8</sub>
EINECS Number:	233-514-0
Chemical Family:	metal carbonyl complexes
Synonym:	Cobalt octacarbonyl, Dicobalt octacarbonyl, Octacarbonyldicobalt

<b>Section 2: Composition and Information on Ingredients</b>				
Ingredient	CAS Number	Percent	ACGIH (TWA)	OSHA (PEL)
Title Compound	10210-68-1	95%	0.1mg/m <sup>3</sup>	no data
hexanes	73513-42-5	5%	50ppm	1800mg/m <sup>3</sup>

<b>Section 3: Hazards Identification</b>	
Emergency Overview:	Harmful by inhalation and if swallowed. Inhalation can lead to headaches and dizziness. May cause sensitization by skin contact. Limited evidence of a carcinogenic effect.
Primary Routes of Exposure:	Ingestion, inhalation
Eye Contact:	May cause mild irritation to the eyes.
Skin Contact:	May cause mild irritation to the skin. May cause sensitization by skin contact.
Inhalation:	Harmful by inhalation. Inhalation could lead to dizziness and headache.
Ingestion:	Harmful if swallowed.
Acute Health Affects:	Harmful by inhalation and if swallowed. Inhalation can lead to headaches and dizziness. May cause sensitization by skin contact.
Chronic Health Affects:	Limited evidence of a carcinogenic effect.
NTP:	No
IARC:	Yes
OSHA:	No

<b>SECTION 4: First Aid Measures</b>	
Eye Exposure:	Immediately flush the eyes with copious amounts of water for at least 15 minutes. A victim will need assistance in keeping their eye lids open. Get immediate medical attention.
Skin Exposure:	Wash the affected area immediately with water. Remove contaminated clothing if necessary. Seek medical assistance if irritation persists.
Inhalation:	Remove victim to fresh air immediately. Keep the victim lying down and warm. Give oxygen as soon as possible. If shock occurs, respond with appropriate first aid. Transport the victim to a hospital.
Ingestion:	Seek medical attention immediately. Keep the victim calm. Give water to dilute the toxin (only if conscious). Induce vomiting only if directed by medical personnel.

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**SECTION 5: Fire Fighting Measures**

Flash Point: -9°F (hexane)  
Autoignition Temperature: no data  
Explosion Limits: no data  
Extinguishing Medium: carbon dioxide, dry chemical or foam  
Special Fire Fighting Procedures: If involved in a fire, fire fighters should be equipped with a NIOSH-approved positive pressure self-contained breathing apparatus.  
Hazardous Combustion and Decomposition Products: carbon monoxide, carbon dioxide, and cobalt oxide dust.  
Unusual Fire or Explosion Hazards: Flammable solid. No unusual fire or explosion hazards.

**SECTION 6: Accidental Release Measures**

Spill and Leak Procedures: Small quantities can be mixed with sodium carbonate or vermiculite and swept up. If large quantities are spilled, and ventilation is not available, personnel should be fitted with a self-contained breathing apparatus.

**SECTION 7: Handling and Storage**

Handling and Storage: Store cold. Keep away from heat and direct sunlight. Keep containers tightly sealed.

**SECTION 8: Exposure Controls and Personal Protection**

Eye Protection: Always wear approved safety glasses when handling chemical substances.  
Skin Protection: Wear protective clothing and gloves. Consult with glove manufacturer to determine the proper type of glove.  
Ventilation: This product should be handled in an efficient fume hood.  
Respirator: If ventilation is not available a respirator should be worn. The use of respirators requires a Respirator Protection Program to be in compliance 29 CFR 1910.134.  
Ventilation: This product should be handled in an efficient fume hood.  
Additional Protection: No additional protection required.

**SECTION 9: Physical and Chemical Properties**

Color and Form: dark orange xtl.  
Molecular Weight: 341.95  
Melting Point: 51-52° dec.  
Boiling Point: no data  
Vapor Pressure: no data  
Specific Gravity: 1.73  
Odor: organic odor  
Solubility in Water: Insoluble

**SECTION 10: Stability and Reactivity**

Stability: air-sensitive solid. Store cold.  
Hazardous Polymerization: no hazardous polymerization  
Conditions to Avoid: prolonged contact with air and exposure to an ignition source.  
Incompatibility: Oxidizing agents and halogens  
Decomposition Products: carbon dioxide, carbon monoxide, organic fumes, cobalt oxide.

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**SECTION 11: Toxicological Information**

RTECS Data: Oral (rat); LD50: 754 mg/kg. Inhalation (rat); LD50: 165 mg/m3. Oral (mouse); LD50: 378 mg/kg. Inhalation (mouse); LC50: 269000 ug/m3/2H. Oral (rat); TDLo: 3468 mg/kg/23D-I. For hexane: Inhalation(human); TCLo: 190ppm/8W. Oral(rat); LD50; 28710mg/kg. Inhalation(rat); LC50: 48000ppm/4H. Inhalation(rat); reproductive, behavioral, newborn: TcLo: 1000ppm/6H. Inhalation(rat); reproductive, newborn, wt. loss: TcLo: 5000ppm/20H.

Carcinogenic Effects: Possible carcinogen (as Co)

Mutagenic Effects: For hexane: Possible mutagen

Tetratogenic Effects: For hexane: Possible reproductive effector

**SECTION 12: Ecological Information**

Ecological Information: No information available.

**SECTION 13: Disposal Considerations**

Disposal: Dispose of this material according to local, state and federal regulations.

**SECTION 14: Transportation**

Shipping Name (CFR): Self-heating solid, Inorganic, N.O.S,  
Hazard Class (CFR): 4.2  
Additional Hazard Class (CFR): NA  
Packaging Group (CFR): II  
UN ID Number (CFR): UN# 3190  
Shipping Name (IATA): Self-heating solid, Inorganic, N.O.S.  
Hazard Class (IATA): 4.2  
Additional Hazard Class (IATA): NA  
Packaging Group (IATA): II  
UN ID Number (IATA): UN# 3190

**SECTION 15: Regulatory Information**

TSCA: Listed in the TSCA inventory.  
SARA (Title 313): Title compound: see category code N096 for reporting.  
Second Ingredient: Hexane: reported on the TSCA. Reportable under SARA 313  
Third Ingredient: none

**SECTION 16: Other Information**

Disclaimer: The information herein is believed to be accurate and reliable as of the date compiled. However, Strem Chemicals, Inc. makes no representation, warranty, or guarantee of any kind with respect to the information contained in this document or any use of the product based on this information.

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