

# COBALT CARBONYL

0976  
April 2004

CAS No: 10210-68-1  
RTECS No: GG0300000  
UN No: 3281

Dicobalt octacarbonyl  
Cobalt tetracarbonyl  
Octacarbonyldicobalt  
 $C_8O_8Co_2 / (OC)_3Co:(CO)_2:Co(CO)_3$   
Molecular mass: 341.9

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/SYMPTOMS	PREVENTION	FIRST AID/FIRE FIGHTING
<b>FIRE</b>	Combustible. Gives off irritating or toxic fumes (or gases) in a fire.	NO open flames. NO contact with oxidants.	Powder, water spray, foam, carbon dioxide.
<b>EXPLOSION</b>			

EXPOSURE		PREVENT DISPERSION OF DUST! STRICT HYGIENE!	
<b>Inhalation</b>	Cough. Sore throat. Shortness of breath. Laboured breathing. Symptoms may be delayed (see Notes).	Local exhaust or breathing protection.	Fresh air, rest. Half-upright position. Artificial respiration may be needed. Refer for medical attention.
<b>Skin</b>	Redness. Pain.	Protective gloves.	Remove contaminated clothes. Rinse skin with plenty of water or shower.
<b>Eyes</b>	Pain. Redness.	Safety goggles, or eye protection in combination with breathing protection if powder.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
<b>Ingestion</b>	Abdominal pain. Burning sensation in the throat and chest. Nausea.	Do not eat, drink, or smoke during work.	Rinse mouth. Give plenty of water to drink. Refer for medical attention.

SPILLAGE DISPOSAL	PACKAGING & LABELLING
Sweep spilled substance into sealable containers; if appropriate, moisten first to prevent dusting. Then remove to safe place. Personal protection: self-contained breathing apparatus.	UN Hazard Class: 6.1 UN Pack Group: II  Airtight. Unbreakable packaging; put breakable packaging into closed unbreakable container. Do not transport with food and feedstuffs.

EMERGENCY RESPONSE	STORAGE
Transport Emergency Card: TEC (R)-61GT3-II-S	Separated from strong oxidants. Well closed. Keep in a well-ventilated room.

### IMPORTANT DATA

**Physical State; Appearance**

ORANGE CRYSTALS.

**Chemical dangers**

The substance decomposes on warming or under the influence of air producing toxic fumes of carbon monoxide and cobalt (see ICSC 0023, ICSC 0785). Reacts with oxidants causing fire hazard.

**Occupational exposure limits**

TLV: (as Co) 0.1 mg/m<sup>3</sup> as TWA; (ACGIH 2004).  
MAK not established.

**Routes of exposure**

The substance can be absorbed into the body by inhalation and by ingestion.

**Inhalation risk**

A harmful contamination of the air will be reached rather slowly on evaporation of this substance at 20/C.

**Effects of short-term exposure**

The substance is irritating to the eyes and the skin. The substance is severely irritating to the respiratory tract. Inhalation of may cause lung oedema (see Notes). The effects may be delayed. Medical observation is indicated.

### PHYSICAL PROPERTIES

Decomposes below boiling point at 52/C  
Melting point: 51/C  
Density: 1.7 g/cm<sup>3</sup>

Solubility in water: none  
Vapour pressure, Pa at 20/C: about 200

### ENVIRONMENTAL DATA

### NOTES

Do NOT take working clothes home.

The symptoms of lung oedema often do not become manifest until a few hours have passed and they are aggravated by physical effort. Rest and medical observation is therefore essential.

Immediate administration of an appropriate inhalation therapy by a doctor or a person authorized by him/her, should be considered. Environmental effects from the substance have not been investigated.

### ADDITIONAL INFORMATION

**LEGAL NOTICE**

Neither the EC nor the IPCS nor any person acting on behalf of the EC or the IPCS is responsible