Material Safety Data Sheet

Version 3.0
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1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Cobalt carbonyl

Product Number : 60811
Brand : Aldrich

Company : Sigma-Aldrich Canada, Ltd
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CANADA
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2. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Dicobalt octacarbonyl

Formula : $C_8Co_2O_8$

CAS-No.	EC-No.	Index-No.	Concentration
Octacarbonyldicobalt			
10210-68-1	233-514-0	-	>= 90 - <= 95 %
n-Hexane			
110-54-3	203-777-6	601-037-00-0	>= 5 - <= 10 %

3. HAZARDS IDENTIFICATION

Emergency Overview

Target Organs

Respiratory system, Blood, Eyes, Skin, Central nervous system, Peripheral nervous system., Kidney, Testes.

WHMIS Classification

D2A Very Toxic Material Causing Other Toxic Effects
D2B
F

Reproductive hazard
Moderate skin irritant
Skin sensitiser
Unstable Reactive

HMIS Classification

Health Hazard: 2
Chronic Health Hazard: *
Flammability: 0
Physical hazards: 2

Potential Health Effects

Inhalation	May be harmful if inhaled. Causes respiratory tract irritation.
Skin	May be harmful if absorbed through skin. Causes skin irritation.
Eyes	Causes eye irritation.
Ingestion	Harmful if swallowed.

4. FIRST AID MEASURES

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.Move out of dangerous area.

If inhaled
If breathed in, move person into fresh air. If not breathing give artificial respiration Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES

Flammable properties

Flash point	-23 °C (-9 °F)
Ignition temperature	no data available

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for fire-fighters
Wear self contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation.

Environmental precautions
Do not let product enter drains. Discharge into the environment must be avoided.

Methods for cleaning up
Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Handling
Avoid formation of dust and aerosols.
Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

Storage
Keep container tightly closed in a dry and well-ventilated place.

Recommended storage temperature: 2 - 8 °C

Air sensitive.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Update	Basis
Octacarbonyldicobalt	10210-68-1	TWA	0.1 mg/m3	2007-01-01	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
		TWA	0.1 mg/m3	2006-11-29	Canada. British Columbia OEL
		TWAEV	0.1 mg/m3	2005-02-03	Canada. Ontario OELs
		TWAEV	0.1 mg/m3	2006-12-29	Canada. Quebec OELs
n-Hexane	110-54-3	TWA	20 ppm	2006-11-29	Canada. British Columbia OEL
Remarks	Contributes significantly to the overall exposure by the skin route.				
		TWAEV	50 ppm 176 mg/m3	2005-12-17	Canada. Ontario OELs
		TWA	50 ppm 176 mg/m3	2007-01-01	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
	Substance may be readily absorbed through intact skin				
		TWAEV	50 ppm 176 mg/m3	2006-12-29	Canada. Quebec OELs
	Skin (percutaneous)				

Personal protective equipment

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection
Handle with gloves.

Eye protection
Safety glasses

Skin and body protection
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	crystalline
Colour	dark red

Safety data

pH	no data available
Melting point	no data available
Boiling point	no data available
Flash point	-23 °C (-9 °F)
Ignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Water solubility	no data available

10. STABILITY AND REACTIVITY

Storage stability
Stable under recommended storage conditions.

Materials to avoid
Oxidizing agents

Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, Cobalt/cobalt oxides

11. TOXICOLOGICAL INFORMATION

Acute toxicity

no data available

Irritation and corrosion

no data available

Sensitisation

no data available

Chronic exposure

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

Signs and Symptoms of Exposure

Central nervous system depression, Lung irritation, chest pain, pulmonary edema, giddiness, slowed reaction time, slurred speech, Headache, Dizziness, Drowsiness, Unconsciousness

Potential Health Effects

Inhalation	May be harmful if inhaled. Causes respiratory tract irritation.
Skin	May be harmful if absorbed through skin. Causes skin irritation.
Eyes	Causes eye irritation.

Ingestion	Harmful if swallowed.
Target Organs	Respiratory system, Blood, Eyes, Skin, Central nervous system, Peripheral nervous system., Kidney, Testes.,

12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)

no data available

Ecotoxicity effects

no data available

Further information on ecology

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

13. DISPOSAL CONSIDERATIONS

Product
Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN-Number: 3190 Class: 4.2 Packing group: II
Proper shipping name: Self-heating solid, inorganic, n.o.s.
Marine pollutant: No
Poison Inhalation Hazard: No

IMDG
UN-Number: 3190 Class: 4.2 Packing group: II EMS-No: F-A, S-J
Proper shipping name: SELF-HEATING SOLID, INORGANIC, N.O.S.
Marine pollutant: No

IATA
UN-Number: 3190 Class: 4.2 Packing group: II
Proper shipping name: Self-heating solid, inorganic n.o.s.

15. REGULATORY INFORMATION

DSL Status
All components of this product are on the Canadian DSL list.

WHMIS Classification

D2A	Very Toxic Material Causing Other Toxic Effects	Reproductive hazard
D2B		Moderate skin irritant
F		Skin sensitiser
		Unstable Reactive

16. OTHER INFORMATION

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Co., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.