

## MATERIAL SAFETY DATA SHEET

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Version 1.3

## Section 1 - Product and Company Information

Product Name	COBALT(II,III) OXIDE, POWDER, <10 MICRON
Product Number	221643
Brand	ALDRICH
Company	Sigma-Aldrich
Street Address	3050 Spruce Street
City, State, Zip, Country	SAINT LOUIS MO 63103 US
Technical Phone:	314 771 5765
Emergency Phone:	414 273 3850 Ext. 5996
Fax:	800 325 5052

## Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313
COBALT(II,III) OXIDE	1308-06-1	Yes
Formula	Ca. Co <sub>3</sub> O <sub>4</sub>	
Synonyms	cobalto-cobaltic oxide	

## Section 3 - Hazards Identification

## EMERGENCY OVERVIEW

Harmful.

Irritating to eyes, respiratory system and skin. May cause sensitization by skin contact. Limited evidence of a carcinogenic effect.

Possible Carcinogen (US). Target organ(s): Lungs. Connective tissue.

## HMIS RATING

HEALTH: 3\*

FLAMMABILITY: 0

REACTIVITY: 0

## NFPA RATING

HEALTH: 3

FLAMMABILITY: 0

REACTIVITY: 0

\*additional chronic hazards present.

For additional information on toxicity, please refer to Section 11.

## Section 4 - First Aid Measures

## ORAL EXPOSURE

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

## INHALATION EXPOSURE

If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

#### DERMAL EXPOSURE

In case of contact, immediately wash skin with soap and copious amounts of water.

#### EYE EXPOSURE

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

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### Section 5 - Fire Fighting Measures

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#### FLASH POINT

N/A

#### AUTOIGNITION TEMP

N/A

#### FLAMMABILITY

N/A

#### EXTINGUISHING MEDIA

Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

#### FIREFIGHTING

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.  
Specific Hazard(s): Emits toxic fumes under fire conditions.

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### Section 6 - Accidental Release Measures

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#### PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL

Evacuate area.

#### PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves. Wear disposable coveralls and discard them after use.

#### METHODS FOR CLEANING UP

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

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### Section 7 - Handling and Storage

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#### HANDLING

User Exposure: Do not breathe dust. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

#### STORAGE

Suitable: Keep container closed.

#### SPECIAL REQUIREMENTS

Hygroscopic.

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### Section 8 - Exposure Controls / PPE

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#### ENGINEERING CONTROLS



Conditions to Avoid: Moisture.  
Materials to Avoid: Reducing agents.

#### HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: In case of fire, development of toxic and irritant decomposition products., Metal oxides

#### HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

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### Section 11 - Toxicological Information

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#### ROUTE OF EXPOSURE

Skin Contact: Causes skin irritation.  
Skin Absorption: May be harmful if absorbed through the skin.  
Eye Contact: Causes eye irritation.  
Inhalation: Material is irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.  
Ingestion: Harmful if swallowed.

#### SENSITIZATION

Skin: May cause allergic skin reaction.

#### TARGET ORGAN(S) OR SYSTEM(S)

Lungs. Connective tissue.

#### SIGNS AND SYMPTOMS OF EXPOSURE

Ingestion can cause: Burning pain in mouth, throat and stomach.  
Repeated exposure can cause: Malaise and cardiac irregularities.  
Convulsions. Vomiting.

#### TOXICITY DATA

Oral  
Rat  
> 5000 mg/kg  
LD50  
Remarks: Nutritional and Gross Metabolic:Weight loss or decreased weight gain.

Intraperitoneal  
Mouse  
1890 MG/KG  
LD50

#### CHRONIC EXPOSURE - CARCINOGEN

Result: Carcinogen.

#### IARC CARCINOGEN LIST

Rating: Group 2B

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### Section 12 - Ecological Information

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No data available.

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### Section 13 - Disposal Considerations

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#### APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

Contact a licensed professional waste disposal service to dispose of this material. Observe all federal, state, and local environmental regulations.

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## Section 14 - Transport Information

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### DOT

Proper Shipping Name: None  
Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

### IATA

Non-Hazardous for Air Transport: Non-hazardous for air transport.

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## Section 15 - Regulatory Information

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### EU ADDITIONAL CLASSIFICATION

Symbol of Danger: Xn  
Indication of Danger: Harmful.  
R: 36/37/38 43 40  
Risk Statements: Irritating to eyes, respiratory system and skin. May cause sensitization by skin contact. Limited evidence of a carcinogenic effect.  
S: 26 36/37/39  
Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves, and eye/face protection.

### US CLASSIFICATION AND LABEL TEXT

Indication of Danger: Harmful.  
Risk Statements: Irritating to eyes, respiratory system and skin. May cause sensitization by skin contact. Limited evidence of a carcinogenic effect.  
Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves, and eye/face protection.  
US Statements: Possible Carcinogen (US). Target organ(s): Lungs. Connective tissue.

### UNITED STATES REGULATORY INFORMATION

SARA LISTED: Yes  
DEMINIMIS: 0.1 %  
NOTES: This product is subject to SARA section 313 reporting requirements. This product is subject to SARA section 313 reporting requirements.  
TSCA INVENTORY ITEM: Yes

### CANADA REGULATORY INFORMATION

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.  
DSL: Yes  
NDSL: No

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## Section 16 - Other Information

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### DISCLAIMER

For R&D use only. Not for drug, household or other uses.

### WARRANTY

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

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