



# Material Safety Data Sheet

## Cobalt(II) Oxide

Version: 2.0 EN

Revision Date: 2024-12

### SECTION 1: IDENTIFICATION OF THE PRODUCT AND OF THE COMPANY

#### 1.1 Product identifiers

Product Name	Cobalt(II) Oxide
CAS No	1307-96-6
Synonyms	Cobaltous oxide

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Recommended Use	Chemical intermediate, For research and industrial use only
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#### 1.3 Details of the supplier of the safety data sheet

Company	China lithium Products technology Company Limited 9 HG, No.99 LuJiang Road, Xiamen city, China
Telephone	+86 592 2687860
Email	info@lithium-chemical.com

#### 1.4 Emergency telephone number

Emergency phone #	+86 592 2687860
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### SECTION 2: HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

##### GHS Classification

Acute toxicity, Oral (Category 5), H303

Skin corrosion/irritation (Category 2), H315

Serious eye damage/eye irritation (Category 1), H318

Specific target organ toxicity - repeated exposure, Inhalation (Category 1), Lungs, H372

Short-term (acute) aquatic hazard (Category 3), H402

#### 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word Danger

##### Hazard Statements

H301	Toxic if swallowed
H317	May cause an allergic skin reaction
H330	Fatal if inhaled
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled



H350	May cause cancer by inhalation
H360	May damage fertility or the unborn child
H410	Very toxic to aquatic life with long lasting effects

#### **Precautionary Statements**

##### **Prevention**

P201	Obtain special instructions before use
P202	Do not handle until all safety precautions have been read and understood
P260	Do not breathe dust
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 should 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

##### **Response**

P301 + P310 + P330	IF SWALLOWED: Immediately call a POISON CENTER/ doctor. Rinse mouth
P302 + P352	IF ON SKIN: Wash with plenty of 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
P342 + P311	If experiencing respiratory symptoms: Call a POISON CENTER/ doctor
P391	Collect spillage

##### **Storage**

P403 + P233	Store in a well-ventilated place. Keep container tightly closed
P405	Store locked up

##### **Disposal**

P501	Dispose of contents/ container to an approved waste disposal plant
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##### **Hazard Statements**

No data available

##### **Precautionary Statements**

No data available

##### **Supplemental Hazard Statements**

None

## **2.3 Physical and chemical hazards**

Referring to current information, no physical or chemical hazard

## **2.4 Health hazards**

H301	Toxic if swallowed
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H330	Fatal if inhaled
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H317	May cause an allergic skin reaction
H350	May cause cancer by inhalation
H360	May damage fertility or the unborn child

## 2.5 Environmental hazards

H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

### Other hazards

None

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

Substance name	Cobalt Oxide
Formula	CoO
CAS No	1307-96-6
EC No	215-154-6

**Hazardous ingredients:** Cobalt(II) oxide, Classification: Acute toxicity Category 3; Acute toxicity Category 2; Respiratory sensitization Sub-category 1B; Skin sensitization Sub-category 1B; Carcinogenicity Category 1B; Reproductive toxicity Category 1B; Short-term (acute) aquatic hazard Category 1; Long term (chronic) aquatic hazard Category 1; H301, H330, H334, H317, H350, H360, H400, H410 M-Factor - Aquatic Acute: 10 - Aquatic Chronic: 1; Concentration:  $\leq 100\%$

## SECTION 4: FIRST AID MEASURES

### 4.1 Description of first aid measures

#### General notes

Show this material safety data sheet to the doctor in attendance

#### If inhaled

fresh air. Call in physician

#### In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician

#### In case of eye contact

Flush eyes with water as a precaution

#### If swallowed

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

### 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

### 4.3 Indication of any immediate medical attention and special treatment needed

No data available



## SECTION 5: FIREFIGHTING MEASURES

### 5.1 Extinguishing media

#### **Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide

#### **Unsuitable extinguishing media**

For this substance/mixture no limitations of extinguishing agents are given

### 5.2 Special hazards arising from the substance or mixture

Cobalt/cobalt oxides

### 5.3 Advice for firefighters [www.lithium-chemical.com](http://www.lithium-chemical.com)

Wear self-contained breathing apparatus for firefighting if necessary

### 5.4 Further information

None

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Evacuate the danger area, observe emergency procedures, consult an expert

For personal protection see section 8

### 6.2 Environmental precautions

Prevent further spillage or leakage if it is safe to do so, Do not let the chemical enter drains, Discharge into the environment must be avoided

### 6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts

### 6.4 Reference to other sections

For disposal see section 13

## SECTION 7: HANDLING AND STORAGE

### 7.1 Precautions for safe handling

#### **Advice on safe handling**

Work under hood. Do not inhale substance/mixture

#### **Hygiene measures**

Change contaminated clothing. Wash hands after working with substance

For precautions see section 2.2

### 7.2 Conditions for safe storage, including any incompatibilities

#### **Storage conditions**

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

Keep in a dry place

#### **Storage class**



Storage class (TRGS 510): Non-combustible, acute toxic Cat. 1 and 2 / very toxic hazardous materials

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

Component	CAS-No.	Value	Value	Basis
Cobalt(II) oxide	1307-96-6	PC-TWA	0.05 mg/m <sup>3</sup>	Occupational exposure limits for hazardous agents in the workplace - Chemical hazardous agents
		Remarks	G2B - Possibly carcinogenic to humans	Sensitizing
		PC-STEL	0.1 mg/m <sup>3</sup>	Occupational exposure limits for hazardous agents in the workplace - Chemical hazardous agents
			G2B - Possibly carcinogenic to humans	Sensitizing

### 8.2 Exposure controls

Appropriate engineering controls:

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance

#### Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

#### Body Protection

protective clothing

#### Respiratory protection

required when dusts are generated

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system

#### Control of environmental exposure

Do not let product enter drains

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Appearance	Form: powder Colour: No data available
Odour	No data available
Odour Threshold	No data available
pH	No data available



Melting point/freezing point	1,830 °C
Initial boiling point and boiling range	No data available
Flash point	No data available
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability or explosive limits	No data available
Vapour pressure	No data available
Vapour density	No data available
Relative density	No data available
Water solubility	0.00488 g/l at 20 °C (68 °F) - OECD Test Guideline 105 - slightly soluble
Partition coefficient: n- octanol/water	log Pow: 5
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available

## 9.2 Other safety information

No data available

## SECTION 10: STABILITY AND REACTIVITY

### 10.1 Reactivity

No additional information available

### 10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature)

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

Avoid moisture

### 10.5 Incompatible materials

Strong oxidizing agents

### 10.6 Hazardous decomposition products

In the event of fire: see section 5

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

**Acute toxicity:** LD50 Oral - Rat - male and female - 202 mg/kg  
(OECD Test Guideline 401)  
LC50 Inhalation - Rat - male and female - 4 h - 0.06 mg/l - dust/mist



	(OECD Test Guideline 436)
	Dermal: No data available
	Skin - reconstructed human epidermis (RhE)
<b>Skin corrosion/irritation:</b>	Result: No skin irritation - 15 min
	(OECD Test Guideline 439)
	Eyes - Rabbit
<b>Serious eye damage/eye irritation:</b>	Result: No eye irritation
	(OECD Test Guideline 405)
	Local lymph node assay (LLNA) - Mouse
<b>Respiratory or skin sensitization:</b>	Result: positive
	(OECD Test Guideline 429)
	Test Type: Mouse
	Test system: lymphocyte
	Metabolic activation: with and without metabolic activation
	Method: OECD Test Guideline 476
<b>Germ cell mutagenicity:</b>	Result: negative
	Species: Rat
	Application Route: Oral
	Method: OECD Test Guideline 475
	Result: negative
<b>Carcinogenicity</b>	
	May cause cancer by inhalation
<b>Reproductive toxicity</b>	
	May damage fertility
<b>Specific target organ toxicity - single exposure</b>	
	No data available
<b>Specific target organ toxicity - repeated exposure</b>	
	No data available
<b>Aspiration hazard</b>	
	No data available

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1 Toxicity

No data available

### 12.2 Persistence and degradability

The methods for determining biodegradability are not applicable to inorganic substances

### 12.3 Bioaccumulative potential

No data available

### 12.4 Mobility in soil

No data available

**12.5 Results of PBT and vPvB assessment**

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

**12.6 Other adverse effects**

No data available

**SECTION 13: DISPOSAL CONSIDERATIONS****13.1 Waste treatment methods****Product**

Offer surplus and non-recyclable solutions to a licensed disposal company

**Remarks**

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities

**SECTION 14: TRANSPORT INFORMATION****ADR/RID**

UN number: 3288

Packing group: II

Environmental hazards: Yes

Proper shipping name: TOXIC

Transport hazard class(es): 6.1

SOLID, INORGANIC, N.O.S.

(Cobalt(II) oxide)

**IMDG**

IMDG UN number: 3288

Packing group: II

Environmental hazards: Yes

Proper shipping name: TOXIC

Transport hazard class(es): 6.1

SOLID, INORGANIC, N.O.S.

(Cobalt(II) oxide)

**IATA**

UN number: 3288

Packing group: II

Environmental hazards: No

Proper shipping name: TOXIC

Transport hazard class(es): 6.1

SOLID, INORGANIC, N.O.S.

(Cobalt(II) oxide)

**SECTION 15: REGULATORY INFORMATION****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulatory information**

Law on the Prevention and Control of Occupational Diseases

**15.2 Other regulations**

Please pay attention on the waste treatment should also comply with local regulations requirement



## SECTION 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. China Lithium Product Technology Co., Ltd.( CLPC) and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See [www.lithium-chemical.com](http://www.lithium-chemical.com) for additional terms and conditions of sale.