

## SAFETY DATA SHEET

**PRODUCT NAME:** COBALT OXIDE

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### 1 – IDENTIFICATION OF MATERIAL AND SUPPLIER

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**SUPPLIER:** \_\_\_\_\_

**ADDRESS:** \_\_\_\_\_

**TELEPHONE:** \_\_\_\_\_

**FACSIMILIE:** \_\_\_\_\_

**EMERGENCY:** \_\_\_\_\_

**WEB SITE:** \_\_\_\_\_

**E-MAIL:** \_\_\_\_\_

**PRODUCT NAME:** Cobalt Oxide (Co<sub>3</sub>O<sub>4</sub>).

**PRODUCT NUMBER:** RM006

**CAS NO:** 11104-61-3

**USES:** CERAMIC GLAZES

**ISSUED DATE:** Tuesday, 8 May 2018

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### 2 – HAZARDS IDENTIFICATION

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**GHS LABEL ELEMENTS:**

**HAZARD STATEMENTS:**

H303: May be harmful if swallowed.  
H313: May be harmful in contact with skin.  
H317: May cause an allergic skin reaction.  
H333: May be harmful if inhaled.

**PRECAUTIONARY STATEMENTS:**

P261: Avoid breathing dust.  
P262: Do not get in eyes, on skin.  
P264: Wash hands thoroughly after handling.

**SIGNAL WORD:** WARNING



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**UN NUMBER:** None allocated  
**PACKING GROUP:** None allocated  
**HAZCHEM CODE:** None allocated

**DG CODE:** None allocated  
**SUBSIDURARY RISK:** None allocated

### 3 – COMPOSITION / INFORMATION ON INGREDIENTS

ENTITY	CAS NO	CLASSIFICATION	%
Cobalt Oxide	11104-61-3		100%

### 4 – FIRST AID MEASURES

<b>EYE:</b>	Flush eyes with large quantities of water for at least 15 minutes. If irritation persists after washing, contact a doctor.
<b>INHALED:</b>	Ventilate the premises. The patient is to be removed immediately from the contaminated premises and made to rest in a well ventilated area. Should the patient feel unwell, contact a doctor.
<b>SKIN:</b>	Wash off immediately with soap and plenty of water. Remove and wash contaminated clothing before re-use. If symptoms persist, call a doctor.
<b>SWALLOWED:</b>	Contact a doctor and present the safety-data sheet.
<b>ADVICE TO DOCTOR:</b>	Treat symptomatically.

### 5 – FIRE FIGHTING MEASURES

<b>FLAMMABILITY:</b>	⊕ Non Flammable.
<b>FIRE &amp; EXPLOSION:</b>	No fire or explosion hazard exists.
<b>EXTINGUISHING:</b>	Use an extinguishing agent suitable for the surrounding fire.
<b>PROTECTIVE EQUIPMENT:</b>	Use respiratory protection.
<b>HAZCHEM CODE:</b>	None allocated.

### 6 – ACCIDENTAL RELEASE MEASURES

<b>SPILLAGE:</b>	Use gloves and protective clothing. In the event of particulates aerosols use respiratory protection. Keep away from drains, surface- and ground-water and soil. Limit leakages with earth or sand. If the product has escaped into a water course, into the drainage system, or has contaminated the ground or vegetation, notify the competent authorities. Remove the waste materials with a suitable device (for instance a suction pump) and dispose. After the product has been recovered, rinse the area and materials involved with water.
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### 7 – STORAGE AND HANDLING

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**PRODUCT NAME:** COBALT OXIDE

**STORAGE:** Keep containers tightly closed in a dry, cool and well-ventilated place

**HANDLING:** Avoid dust formation. Do not breathe vapors/dust. Handle in accordance with good industrial hygiene and safety practice. Use only in area provided with appropriate exhaust ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Do not eat, drink, or smoke in areas of use or storage. Do not take internally. Wash thoroughly after handling.

### 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

**EXPOSURE STANDARDS:**

INGREDIENT	TWA		STEL		ACGIH TLV	
	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
COBALT OXIDE <sup>1</sup>	-	-	-	-	-	10

**ACGIH:**

1. Animal carcinogen: Agent is carcinogenic in experimental animals at dose levels, by route (s) of administration at site, or histologic type, or by mechanism considered relevant to workers exposure. Available epidemiologist studies do not confirm an increased risk of cancer in humans except under common levels of exposure.

**BIOLOGICAL LIMITS:**

No biological limits allocated.

**ENGINEERING CONTROLS:**

Use in well ventilated area. Where an inhalation risk exists, mechanical extraction ventilation is recommended. Maintain vapor levels below the recommended exposure standard.

**PPE**

Eye / Face

Wear appropriate eye protection / safety glasses.

Hands

Impervious gloves.

Body

Wear appropriate clean, protective clothing such as, but not limited to, overalls, smocks, and aprons.

Respiratory

Use a NIOSH approved respirator in case of insufficient ventilation.

**WORK/HYGENIC PRACTICES:**

When products are in use, do not eat, drink, or smoke. Wash hands immediately after use.

### 9 – PHYSICAL AND CHEMICAL PROPERTIES

<b>APPEARANCE:</b>	Black powder
<b>ODOUR:</b>	None
<b>BOILING POINT:</b>	N/A
<b>MELTING POINT:</b>	>500°C
<b>VAPOUR PRESSURE:</b>	NOT AVAILABLE
<b>SPECIFIC GRAVITY:</b>	N/A
<b>FLASH POINT:</b>	NOT RELEVANT
<b>FLAMMABILITY LIMITS:</b>	NON FLAMMABLE

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<b>SOLUBILITY IN WATER:</b>	Insoluble
<b>VISCOSITY:</b>	No data
<b>pH:</b>	N/A
<b>% VOLATILES</b>	N/A
<b>EVAPORATION RATE</b>	NOT AVAILABLE
<b>UPPER EXPLOSION LIMIT</b>	NOT RELEVANT
<b>LOWER EXPLOSION LIMIT</b>	NOT RELEVANT

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### 10 – STABILITY AND REACTIVITY

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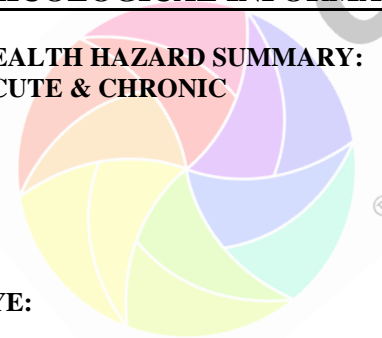
<b>REACTIVITY:</b>	None known.
<b>CHEMICAL STABILITY:</b>	Stable.
<b>CONDITIONS TO AVOID:</b>	Fumes from firing in kiln; Mist created from spray application. Avoid contact with incompatible substances.
<b>INCOMPATIBLE MATERIAL:</b>	None known.
<b>HAZARDOUS DECOMPOSITION:</b>	No decomposition if stored normally. Thermal decomposition can lead to release of irritating gases and vapors. Metal compounds.
<b>HAZARDOUS REACTIONS:</b>	None known.

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### 11 – TOXICOLOGICAL INFORMATION

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**HEALTH HAZARD SUMMARY:  
ACUTE & CHRONIC**



Prolonged contact with dust can be very irritating to the eyes and/or skin. High dust levels can be irritating to the respiratory tract. Over exposure to dust may cause lung damage. With adequate ventilation, dust control and good personal hygiene, symptoms of overexposure should not occur. Ingestion of large amounts may cause irritation of the gastrointestinal tract, nausea, vomiting and diarrhea. Advise regular medical monitoring of employees by a physician competent in industrial health.

<b>EYE:</b>	May cause serious eye irritation.
<b>INHALATION:</b>	Prolonged inhalation of dust or metal dust, and fume or mist containing cobalt may cause serious respiratory illness. May cause an irritation of respiratory organs of sensitive persons resulting in obstruction of airways with shortness of breath.
<b>SKIN:</b>	Prolonged exposure may produce irritation.
<b>INGESTION:</b>	Large amounts may cause irritation of the gastrointestinal tract, nausea, vomiting and diarrhoea.

**TOXICITY DATA:**

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### 12 – ECOLOGICAL INFORMATION

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<b>ENVIRONMENT:</b>	No data.
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### 13 – DISPOSAL CONSIDERATIONS

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**PRODUCT NAME:** COBALT OXIDE

**WASTE DISPOSAL:** Contain spillage and scoop or vacuum. Avoid making dust put in appropriate container for disposal. Waste disposal method in accordance with Federal, State and Local Laws.

**LEGISLATION:** Dispose of in accordance with relevant local legislation.

### 14 – TRANSPORTATION

NOT CLASSIFIED AS DANGEROUS GOODS BY THE CRITERIA OF THE ADG CODE.

	LAND TRANSPORT (ADG)	SEA TRANSPORT (IMDG/IMO)	AIR TRANSPORT (IATA/ICAO)
UN NUMBER	None Allocated	None Allocated	None Allocated
PROPER SHIPPING NAME	Powdered Metal Oxide	Powdered Metal Oxide	Powdered Metal Oxide
DG CLASS / DIVISION	None Allocated	None Allocated	None Allocated
SUBSIDIARY RISKS	None Allocated	None Allocated	None Allocated
PACKING GROUP	None Allocated	None Allocated	None Allocated
HAZCHEM CODE	None Allocated	None Allocated	None Allocated

### 15 – REGULATORY INFORMATION

**INVENTORY LISTINGS:**



**AUSTRALIA:**  
All components are listed on AICS or are exempt.

**USA:**  
\*\*\*SARA 313  
This product contains certain oxides and compounds which are subject to reporting requirements of Superfund Amendment and Reauthorization Act (SARA) of 1986, Section 313 of the Emergency Planning and Community Right to Know Act and of 40 CFR, Part 372.  
All ingredients are on TSCA inventory.

**CANADA:**  
All ingredients are on DSL inventory.

**EUROPE:**  
All ingredients are on EC inventory or exempt.

**CHEMICAL SAFETY ASSESSMENT:** EU:  
Warning label required according to the EU guidelines/Dangerous Chemicals Ordinance.

### 16 – OTHER INFORMATION

**ADDITIONAL INFORMATION:** PERSONAL PROTECTIVE EQUIPMENT GUIDLEINES:  
The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment made.

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### HEALTH EFFECTS FROM EXPOSURE:

It should be noted that the effects from exposure to this product will depend on several factors including: frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

### ABBREVIATIONS:

AICS	Australian Inventory of Chemical Substances
ACGIH	American Conference of Governmental Industrial Hygienists
CAS #	Chemical Abstracts Service Number
CNS	Central Nervous System
EC No.	EC No – European Community Number
GHS	Globally Harmonized System
IARC	International Agency for Research on Cancer
LD50	Lethal Dose, 50% / Median Lethal Dose
mg/m <sup>3</sup>	Milligrams per cubic meter
PEL	Permissible Exposure Limit
pH	Acidity < 7 – Alkalinity > 7 measure
ppm	Parts Per Million
REACH	Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals
STOT-RE	Specific target organ toxicity (repeated exposure)
STOT-SE	Specific target organ toxicity (single exposure)
SUSMP	Standard for the Uniform Scheduling of Medicines and Poisons
TLV	Threshold Limit Value
TWA/OEL	Time Weighted Average of Occupational Exposure Limit
STEL	Short Term Exposure Limit
TSCA	Toxic Substances Control Act

### REVISION HISTORY:

Revision	Description
1.0	Creation

### REPORT STATUS:

The report has been by Chrysanthos Color Company Limited – China. The information provided on safety and handling represents the current knowledge at the time of writing. We should be contacted directly for further clarification regarding any aspect of the product if required.

The SDS has been prepared with all due care to include accurate and up-to-date information. We do not however provide any warranty as to accuracy or completeness. As far as lawfully possibly, Chrysanthos Color Company Limited – China accepts no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained herein.

### PREPARED BY:

Tony Crisafi  
Chrysanthos Color Company Limited  
2<sup>nd</sup> Floor, Building B1,  
No 19 Gaoxinxishi Road,  
Nanning High Tech Zone, Nanning,

## SAFETY DATA SHEET

**PRODUCT NAME: COBALT OXIDE**

Guangxi 530003, China.  
Tel/Fax: +86 (771) 231 0885  
Mob: +61 402 830 337  
Email: [info@chrysanthos.com](mailto:info@chrysanthos.com)  
Web: [www.chrysanthos.com](http://www.chrysanthos.com)

**End of SDS**

