

# Safety Data Sheet

## 1. Goods and Manufacturers information

<b>Item Name</b>	Copper(I) oxide		
<b>Other Name</b>	Dicopper oxide、 Cuprous oxide、 Copper(1+) oxide		
<b>Almost Use</b>	Industrial and scientific research uses.		
<b>Manufacturer, importer or supplier's name, address</b>	Hou Jan Industrial Co., Ltd.	Add	5 Ching Chien 3 <sup>rd</sup> Rd. Kuan-Yin Industrial Park Taoyuan Taiwan(R.O.C.)
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## 2. Hazard Identification Information

### Hazard Classification :

- 1.Acute oral toxicity level - Category 4
2. Acute Inhalation Toxicity - Dusts and Mists - Category 4
3. Serious Eye Damage/Eye Irritation - Category 1

### Labeling :



**Signal Word:** Danger

### Hazard :

- 1.Causes serious eye damage.
2. Harmful if swallowed or if inhaled.

### Hazard Prevention Measures:

1. If contact with eyes, wash immediately with plenty of water after contact medical.
2. Do not eat, drink or smoke when using this product.
3. Wash face, hands and any exposed skin thoroughly after handling.
4. Wear suitable protective clothing, gloves, wear goggles, face shields protect.

## 3. Component Identification Information

Component	Range % W/W	CAS No.
Copper(I) oxide	>95%	1317-39-1

## 4. First Aid Measures

Skin Contact :

1. Immediately wash with plenty of water for 15 minutes.
2. Removal of contaminated clothing and shoes
3. As soon as possible for medical treatment.

Eye Contact :

1. Immediately wash with plenty of water for more than 15 minutes
2. As soon as possible for medical treatment.

Ingestion :

1. Do not induce vomiting.
2. Rinse mouth. Give one or two glasses of water to drink.
3. As soon as possible for medical treatment.

## 5. Fire Extinguishing Measures

**For fire extinguishers:** Use dry chemical, carbon dioxide or alcohol-resistant foam.

**Fire Hazards :** Not flammable.

**Special Protective Equipment For Fire Fighters :**

Wear positive pressure self-contained breathing masks and protective clothing firefighters buildings can provide effective protection.

## 6. Accidental Release Measures

**Personal Precautions:**

Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation

**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.

**Methods for Containment and Clean Up:**

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition.

## 7. Handling and Storage

**Handling:**

Handling in a well-ventilated place. Wear suitable personal protective equipment/face protection. Avoid contact with eyes, on skin, or on clothing. Avoid ingestion and inhalation. Avoid dust formation.

**Storage:**

Store the container tightly closed in a dry, cool and well-ventilated place.

## 8. Exposure Controls

### Occupational Exposure Standards:

Occupational Exposure Standards: Copper (Dusts & mist)

PEL (OSHA) / TLV (ACGIH)

1 mg/m<sup>3</sup> (8hr TWA)

The following national occupational exposure limit values for copper and copper compounds apply\*:

Country	LTEL (8 hr TWA mg/m <sup>3</sup> )**	STEL (mg/m <sup>3</sup> ) (ca.15 min)	Note:
Taiwan	1		Copper, Dusts & mists (as Cu)
	0.2	-	Copper (Fume)

\* Sources: SAFEWORK AUSTRALIA: WORKPLACE EXPOSURE STANDARDS FOR AIRBORNE CONTAMINANTS DATE OF EFFECT: 27 APRIL 2018

\*\* TWA is the Time-Weighted Average airborne concentration over an eight-hour working day, for a five-day working week over an entire working life.

**Biological limit value:** No information available

### Appropriate Engineering Controls:

Provide adequate ventilation when using the material and follow the principles of good occupational hygiene to control personal exposures. If dusts are produced local exhaust ventilation should be used.

### Personal Protection:

#### Respiratory Protection:

Use a respirator with type N95 (USA) or PE (EN 143) cartridges as a backup to engineering controls. Risk assessment should be performed to determine if purifying respirators are appropriate. Only use equipment tested and approved under appropriate government

#### Protective Gloves:

Butyl rubber gloves, BR

#### Eye Protection:

Safety glasses or goggles

#### Body Protection:

Protective work clothing. Wear close-toed shoes and long sleeves/pants.

## 9. Physical and Chemical Properties

**Color:** Yellow/ Brown powder

**Physical State:** powder

**Thick Liquid pH :** no data

**Shape:** no data

**Vapor Pressure:** no data

**Autoignition Temperature:** No data

**Flash Point:** no data

**Odor:** Odorless.

**Melting Point:** 1235°C

**Boiling Point:** 1800 °C

**Vapor Density** (air = 1 ): no data

**Density**(Water = 1) : 6.00 (25°C)

**Explosion Limits:** no data

**Test Method:** not available

## 10. Stability and Reactivity

**Stability:** Stable under normal conditions.

**Special situations Hazardous Reactions:** No data.

**Should avoid:** Exposure to air.

**Avoid substances:** Strong oxidizing agents.

**Hazardous decomposition products:** Copper oxides.

## 11.Toxicological information

### **Potential Health Effects:**

Eyes-May cause irritation.

Skin-May cause irritation.

Ingestion-May cause irritation.

Inhalation-May cause irritation.

### **Median Lethal Dose:**

470 mg/kg for rat by mouth.

## 12.Ecological Information

**Toxicity:** no data available.

**Persistence and Degradability:** no data available.

**Bioaccumulative Potential:** no data available.

**Mobility in Soil:** no data available.

**Other adverse Effects:** no data available.

## 13.Waste Disposal Method

### **Waste Disposal Methods :**

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## 14. Transport Information

**Item Name:** Copper(+1) oxide

**Hazard Class :** Class 9

**UN Number :** UN 3077

**Packing Group:** III

**Proper Shipping Name:** Environmentally hazardous substances, solid, n.o.s

## 15. Legal Information

### Applicable Laws and Regulations :

1. Council of Labor Affairs, hazardous materials and hazardous materials of general rules.
2. Ministry of Communications National Police Agency, Traffic Law - road safety rules.
3. Environmental Protection Administration, industrial waste storage, disposal method and facility standards.

## 16. Other Information

### References :

1. Industrial Technology Research Institute of Industrial Safety and Health Technology Development Center, Material Safety Data Sheet.
2. Council of Labor Affairs, Emergency Response Guide.

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