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### Safety Data Sheet

## 1. Chemical product and company identification

Product name : Copper, Powder

Company information

Name of manufacturer : KANTO CHEMICAL CO., INC.

Address : 2-1, Nihonbashi, Muromachi 2-Chome, Chuo-Ku, Tokyo, 103-0022, JP

Name of section : Business Administration Department, Reagent Division

Telephone number : +81-3-6214-1090Facsimile number : +81-3-3241-1047Mail address : BC32@kanto.co.jp

Reference No : 07439

Recommended use : For research use only

Restrictions on use : Seek expert judgment when using the product for applications other

than those recommended.

### 2. Hazards identification

### GHS classification

Health hazards Skin sensitization Category 1A

Specific target organ toxicity Category 1 (digestive organs)

(single exposure)

(single exposure)

Hazard pictograms





Signal word : Danger

 $\hbox{\tt Hazard statements} \qquad \qquad \hbox{\tt :} \quad \hbox{\tt May cause an allergic skin reaction}$ 

 ${\tt May \ cause \ respiratory \ irritation}$ 

Causes damage to organs (digestive organs)

Precautionary statements

Prevention : Do not breathe dust.

Wash hands, forearms and face thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area.

Contaminated work clothing should not be allowed out of the

workplace.

Wear protective gloves/protective clothing/eye protection/face

protection.

Response : IF ON SKIN: Wash with plenty of water.

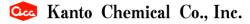
 $\ensuremath{\mathsf{IF}}$  INHALED: Remove person to fresh air and keep comfortable for

hreathing

IF exposed or concerned: Call a POISON CENTER or doctor. Call a POISON CENTER or doctor if you feel unwell.

If skin irritation or rash occurs: Get medical advice/attention.

Take off contaminated clothing and wash it before reuse.



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Storage : Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

Disposal Dispose of contents/container to hazardous or special waste

collection point, in accordance with local, regional, national

and/or international regulation.

## 3. Composition/information on ingredients

Distinction of substance or : Substance

mixture

Chemical name	Concentration (%)	Formula	TSCA	EC-No.	CAS RN
Copper	≥ 99.5	Cu	Listed	231-159-6	7440-50-8

### 4. First aid measures

#### First aid measures

First-aid measures after : Remove the victim to fresh air, and make him blow his nose and

inhalation gargle.

contact

First-aid measures after skin Wash the affected areas under running water.

First-aid measures after eye

contact

Wash the affected areas under running water.

First-aid measures after

ingestion

: Give the victim water or salt water and make him vomit. Get

medical attention.

Personal Protection in First

Aid and Measures

Rescuers should wear proper protective equipment like rubber

gloves, goggles.

### 5. Fire fighting measures

Suitable extinguishing media Dry chemical powder for metal, dry sand

Unsuitable extinguishing media Water, carbon dioxide

Fire hazard May form combustible dust concentrations in air.

Firefighting instructions Move containers from fire area if it can be done without risk, if

not possible, apply water from a safe distance to cool and

protect surrounding area. Fight fire from windward.

In case of fire, cover fire area with dry sand to extinguish.

Personal protection (Emergency

response)

: Wear breathing apparatus.

#### 6. Accidental release measures

#### Personal Precautions, Protective Equipment and Emergency Procedures

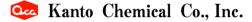
General measures Wear proper protective equipment and avoid contact with skin and

inhalation of dust. Conduct operations from upwind and evacuate people downwind.

**Environmental precautions** 

Environmental precautions : Attention should be given to avoid damage to the environment by

flowing of spillage to rivers.



### Methods and Equipment for Containment and Cleaning up

For containment : Sweep up the chemical and place in a chemical waste container.

Prevention Measures for Secondary Accidents

Remove nearby sources of ignition and prepare extinguishing

media.

### 7. Handling and storage

#### Hand I ing

Technical measures : Wear appropriate protective equipment to avoid contact with skin

or inhalation of dust.

Fire is prohibited.

Ventilate well at working places.

Precautions for safe handling : Avoid formation of dust and aerosols.

Do not allow contact with oxidizing substances.

Storage

Storage conditions : Store in a dark, cool place and tightly closed.

Material used in : Glass, polyethylene, polypropylene.

packaging/containers

## 8. Exposure controls / Personal protection equipment

ACGIH TWA 0.2 mg/m³ (Fume), 1mg/m³ (Dust)

Appropriate engineering : Install a local ventilation system in case of dusty condition.

controls

Protective equipment

Respiratory protection : If necessary, wear dust mask
Hand protection : Impervious protective gloves

Eye protection : Safety goggles

Skin and body protection : Protective clothing, protective boots

## 9. Physical and chemical properties

Physical state : Solid

Color : Reddish gold
Odor : Odorless

pH : No data available

Melting point : 1083  $^{\circ}$  C

Freezing point : No data available

Boiling point : 2582  $^{\circ}$  C

Flash point : No data available
Auto-ignition temperature : No data available
Decomposition temperature : No data available
Flammability : Flammable solid
Vapor pressure : No data available

Relative density :  $8.92 (20^{\circ}\text{C})$ 

Density : No data available
Relative gas density : No data available

4/6

Solubility : Water: Insoluble. Partition coefficient n-: No data available

octanol/water (log Pow)

Explosive limits (vol %) : No data available Viscosity, kinematic : No data available Particle characteristics : No data available

## 10. Stability and reactivity

Reactivity : In moist air containing carbon dioxide, sulfur dioxide or salts,

> basic carbonates and the like are produced on the surface. When heated in air, it produces copper(II) oxide at temperatures below 1000°C and copper(I) oxide at temperatures above 1000°C.

: Stable under normal conditions. Oxidized gradually in air. Chemical stability

Possibility of hazardous : Mixtures of finely ground copper and chlorates or iodine salts can

explode due to friction, impact and heating.

Conditions to avoid : Light, heat, moisture. Incompatible materials : Oxidizing substances.

Hazardous decomposition : Copper oxides.

products

reactions

## 11. Toxicological information

Acute toxicity (oral) Classification not possible Acute toxicity (dermal) Classification not possible Acute toxicity (inhalation) No classification (gas)

No classification (vapor)

Classification not possible (dust, mist)

Skin corrosion/irritation : Classification not possible

> In addition, there is a description that "although there are reports of contact dermatitis related to copper, it is a small number of cases caused in the copper metal or copper compound

industry."

Serious eye damage/irritation

Respiratory sensitization

Skin sensitization

Classification not possible Classification not possible

May cause an allergic skin reaction

Since copper and its compounds are classified to be skin

sensitization group 2 according to Japan Society for Occupational

Health, it was classified into category 1A.

Germ cell mutagenicity

Carcinogenicity

Classification not possible

: No classification

It was classified into group I (not classifiable as a human

carcinogen) by EPA.

Reproductive toxicity

STOT-single exposure

: Classification not possible

Causes damage to organs (digestive organs)

May cause respiratory irritation

From knowledge of human, respiratory inhalation route (respiratory tract irritation) is the main acute toxicity symptoms. When ingested drinking water including a large amount of copper in oral exposure, gastrointestinal symptoms (nausea, vomiting, abdominal pain, etc.) is observed, and there is description that causes nausea, vomiting are main symptoms as main symptoms in many reports. It was classified into category 1(digestive organs), and

category 3 (respiratory tract irritation).

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STOT-repeated exposure : Classification not possible

It has been reported that repeated oral exposure to copper in humans caused gastrointestinal symptoms (nausea, vomiting, abdominal pain, etc.) and liver damage (liver dysfunction, cirrhosis). Since gastrointestinal symptoms include nausea, vomiting, and abdominal pain, we do not support the classification of target organs. In addition, regarding liver damage, only one case was reported, and it was judged that it could not be

generalized.

Aspiration hazard : Classification not possible

## 12. Ecological information

### **Ecotoxicity**

Aquatic acute : Classification not possible
Aquatic chronic : Classification not possible

#### Persistence and degradability

No additional information available

#### Bioaccumulative potential

No additional information available

#### Mobility in soil

No additional information available

#### Hazardous to the ozone layer

Ozone : Classification not possible

## 13. Disposal considerations

Ecological waste information : Solidification method:

Solidify with cement and bury in a landfill site approved for

hazardous waste disposal.

Or entrust approved waste disposal companies with the

disposal.

Contaminated container and

packaging

In case of disposal of empty bottles, dispose bottles after

removing the content thoroughly.

### 14. Transport information

# International Regulations

#### Transport by sea (IMDG)

UN-No. (IMDG) : Not applicable
Proper Shipping Name (IMDG) : Not applicable
Packing group (IMDG) : Not applicable
Transport hazard class(es) : Not applicable
(IMDG)

Air transport(IATA)

UN-No. (IATA) : Not applicable
Proper Shipping Name (IATA) : Not applicable
Packing group (IATA) : Not applicable
Transport hazard class(es) : Not applicable

(IATA)

Marine pollutant : Not applicable

## 15. Regulatory information

Regulatory information with regard to this substance in your country or region should be examined by your own responsibility.

### 16. Other information

Data sources

Encyclopaedia Chimica, Kyoritsu Shuppan Co, Ltd. (1963). Handbook of dangeroous and hazardous chemicals, Japan Industrial Safety & Health Association. (2000-2001). Handbook of 17322 Chemical Products, The Chemical Daily Co. (2022).

 $\operatorname{NITE}$  Chemical Risk Information Platform (NITE-CHRIP), National Institute of Technology and Evaluation.

The information contained herein is based on several references and the present state of our knowledge. However the SDS does not always cover all information about the product, handle the product carefully. The information is intended to ordinary usage, in case of particular handlings, conduct appropriate safety measurements. The information herein is only provision of information, and it does not represent a guarantee the properties of the product. The Safety Data Sheet (SDS) is prepared based on JIS Z7253.