



## Safety Data Sheet

### 1. Identification of the substance/mixture and of the company/undertaking

#### Product identifier:

Product name: Copper oxide, wire(0.6)

Product code (SDS NO): Q1836E-2

#### Details of the supplier of the safety data sheet

Manufacturer/Supplier: KISHIDA CHEMICAL CO., LTD.

Address: 3-1, Honmachibashi, Chuo-ku, Osaka, JAPAN

Division: Safety Management Dept. of Chemicals

Telephone number: +81-6-6946-8061

FAX: +81-6-6946-1607

e-mail address: kagakuhinanzenkanri@kishida.co.jp

### 2. Hazards identification

#### GHS classification and label elements of the product

#### Classification of the substance or mixture

##### HEALTH HAZARDS

Acute toxicity (Oral): Category 4

Acute toxicity (Inhalation): Category 4

Serious eye damage/eye irritation: Category 2

Skin sensitization: Category 1

Specific target organ toxicity – single exposure: Category 1(systemic toxicity)

Specific target organ toxicity – single exposure: Category 2(digestive apparatus)

Specific target organ toxicity – single exposure: Category 3 (Respiratory tract irritation)

##### ENVIRONMENT HAZARDS

Hazardous to the aquatic environment (Acute): Category 1

Hazardous to the aquatic environment (Long-term): Category 1

(Note) GHS classification without description: Not classified/Classification not possible

#### Label elements



Signal word: Danger

#### HAZARD STATEMENT

Harmful if swallowed

Harmful if inhaled

Causes serious eye irritation

May cause an allergic skin reaction

Causes damage to organs after single exposure

May cause damage to organs after single exposure

May cause respiratory irritation

Very toxic to aquatic life

Very toxic to aquatic life with long lasting effects

#### PRECAUTIONARY STATEMENT

##### Prevention

Avoid release to the environment.

Do not breathe dust/fume/gas/mist/vapors/spray.

Use only outdoors or in a well-ventilated area.



Wash contaminated parts thoroughly after handling.  
Wear protective gloves.  
Contaminated work clothing should not be allowed out of the workplace.  
Wear eye protection/face protection.  
Do not eat, drink or smoke when using this product.

**Response**

Collect spillage.  
Call a POISON CENTER or doctor/physician if you feel unwell.  
IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
IF ON SKIN: Wash with plenty of soap and water.  
If skin irritation or rash occurs: Get medical advice/attention.  
Take off contaminated clothing and wash it before reuse.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
If eye irritation persists: Get medical advice/attention.  
Rinse mouth.  
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

**Storage**

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

**Disposal**

Dispose of contents/container in accordance with local/national regulation.

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**3. Composition/information on ingredients****Mixture/Substance selection:****Mixture**

Ingredient name:Copper(I) oxide

Content (%):75

Chemical formula:Cu<sub>2</sub>O

Chemicals No, Japan:1-297

CAS No.:1317-39-1

MW:143.09

ECNO:215-270-7

Ingredient name:Copper(II)oxide

Content (%):22

Chemical formula:CuO

Chemicals No, Japan:1-297

CAS No.:1317-38-0

MW:79.55

ECNO:215-269-1

Ingredient name:Copper

Content (%):2.0

Chemical formula:Cu

CAS No.:7440-50-8

MW:63.546

ECNO:231-159-6

Note : The figures shown above are not the specifications of the product.



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#### 4. First-aid measures

##### Descriptions of first-aid measures

###### General measures

Call a POISON CENTER or doctor/physician if you feel unwell.

###### IF INHALED

Remove person to fresh air and keep comfortable for breathing.

Call a POISON CENTER or doctor/physician if you feel unwell.

###### IF ON SKIN (or hair)

Take off immediately all contaminated clothing. Rinse skin with water/shower.

Wash with plenty of soap and water.

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

###### IF IN EYES

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

###### IF SWALLOWED

Rinse mouth.

Call a POISON CENTER or doctor/physician if you feel unwell.

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#### 5. Fire-fighting measures

##### Extinguishing media

###### Suitable extinguishing media

Use appropriate extinguishing media suitable for surrounding facilities.

###### Unsuitable extinguishing media data is not available.

##### Specific hazards arising from the substance or mixture

Containers may explode when heated.

Fire may produce irritating, corrosive and/or toxic gases.

##### Advice for firefighters

###### Specific fire-fighting measures

Evacuate non-essential personnel to safe area.

###### Special protective equipment and precautions for fire-fighters

Wear fire/flame resistant/retardant clothing.

Wear protective gloves/protective clothing/eye protection/face protection.

Firefighters should wear self-contained breathing apparatus with full face piece operated positive pressure mode.

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#### 6. Accidental release measures

##### Personnel precautions, protective equipment and emergency procedures

Ventilate area until material pick up is complete.

Wear proper protective equipment.

##### Environmental precautions

Prevent spills from entering sewers, watercourses or low areas.

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

Sweep up, place in a bag and hold for waste disposal.

##### Preventive measures for secondary accident

Collect spillage.



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## 7. Handling and storage

### Precautions for safe handling

#### Preventive measures

(Exposure Control for handling personnel)

Do not breathe dust/fume/gas/mist/vapors/spray.

(Protective measures against fire and explosion)

Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

(Exhaust/ventilator)

Exhaust/ventilator should be available.

(Safety treatments)

Avoid contact with skin.

Avoid contact with eyes.

#### Safety Measures

Use only outdoors or in a well-ventilated area.

Wear protective gloves, protective clothing or face protection.

Wear eye protection/face protection.

When using do not eat, drink or smoke.

#### Any incompatibilities

See "10.Stability and Reactivity"

#### Advice on general occupational hygiene

Wash contaminated parts thoroughly after handling.

Do not eat, drink or smoke when using this product.

Contaminated work clothing should not be allowed out of the workplace.

Take off contaminated clothing and wash it before reuse.

#### Storage

##### Conditions for safe storage

Keep container tightly closed.

Store in a cool, dry place. Do not store in direct sunlight.

##### Container and packaging materials for safe handling

Glass

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## 8. Exposure controls/personal protection

### Control parameters

#### Adopted value

(Copper)

ACGIH(1990) TWA: 0.2mg-Fume/m<sup>3</sup>,

TWA: 1mg-Dust and mist/m<sup>3</sup> (Irr; GI; metal fume fever)

#### OSHA-PEL

(Copper)

TWA: 0.1mg-Cu/m<sup>3</sup> (Fume)

TWA: 1mg-Cu/m<sup>3</sup> (Dusts and mists)

### Exposure controls

#### Appropriate engineering controls

Do not use in areas without adequate ventilation.

Eye wash station should be available.

Washing facilities should be available.

#### Individual protection measures

##### Respiratory protection

Wear respiratory protection.

##### Hand protection

Wear protective gloves.

##### Eye protection



Wear eye/face protection.

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## 9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state: Wire

Color: Black

Odor: Odourless to practically odourless

pH data is not available.

Boiling point or initial boiling point data is not available.

Boiling range data is not available.

Melting point/Freezing point data is not available.

Decomposition temperature data is not available.

Flammability (gases, liquids and solids) data is not available.

Flash point data is not available.

Auto-ignition temperature data is not available.

Lower and upper explosion limit/flammability limit data is not available.

Vapor pressure data is not available.

Relative vapor density (Air=1) data is not available.

Density and/or relative density data is not available.

Kinematic viscosity data is not available.

Solubility:

Solubility in water: Insoluble

n-Octanol/water partition coefficient data is not available.

No Particle characteristics data is not available.

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## 10. Stability and Reactivity

Reactivity

Not available.

Chemical stability

Stable under normal storage/handling conditions.

Possibility of hazardous reactions

(Copper)

Mixtures with acetylenic compounds, ethylene oxide and azides are shock-sensitive. Reacts with strong oxidants such as chlorates, bromates and iodates. This generates explosion hazard. (ICSC 0240)

Conditions to avoid

Contact with incompatible materials.

Contact with fire source.

Incompatible materials

Strong oxidizing agents

Hazardous decomposition products

Copper compounds

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## 11. Toxicological Information

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[GHS Cat. Japan, base data]

(Copper(II)oxide)

rat LD50>2000mg/kg (SIAP, 2014)

(Copper(I) oxide)



rat LD50=470mg/kg (EHC 200, 1998)

Acute toxicity (Dermal)

[GHS Cat. Japan, base data]

(Copper(II)oxide)

rat LD50>2000mg/kg (SIAP, 2014)

Acute toxicity (Inhalation)

[GHS Cat. Japan, base data]

(Copper(I) oxide)

mist: rat LC50=ca. 5mg/L (IUCLID, 2000)

Irritant properties

Skin corrosion/irritation data is not available.

Serious eye damage/irritation

[GHS Cat. Japan, base data]

(Copper(I) oxide)

rabbit irritation(IUCLID, 2000)

Sensitization

Skin sensitization

[GHS Cat. Japan, base data]

(Copper(II)oxide)

cat. 1A; JSOH, 2016

(Copper)

cat. 1A; JSOH recommendation, 2012

Mutagenic effects data is not available.

Carcinogenic effects data is not available.

Reproductive toxicity data is not available.

STOT

STOT-single exposure

[cat.1]

[GHS Cat. Japan, base data]

(Copper(I) oxide)

systemic toxicity (HSDB, 2003)

(Copper(II)oxide)

systemic toxicity (DFGOT vol. 22, 2004 et al.)

(Copper)

digestive apparatus (ATSDR, 2004)

[cat.3 (resp. irrit.)]

[GHS Cat. Japan, base data]

(Copper(I) oxide)

respiratory tract irritation (HSDB, 2003)

(Copper(II)oxide)

respiratory tract irritation (DFGOT vol. 22, 2004)

(Copper)

respiratory tract irritation (ATSDR, 2004)

STOT-repeated exposure data is not available.

Aspiration hazard data is not available.

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## 12. Ecological Information

### Ecotoxicity

#### Aquatic toxicity

Very toxic to aquatic life

Very toxic to aquatic life with long lasting effects

#### Aquatic acute toxicity component(s) data

[GHS Cat. Japan, base data]



(Copper(II)oxide)  
Algae (Pseudokirchneriella subcapitata) LC50=3.1 ppb (US EPA: RED, 2009)  
(Copper(I) oxide)  
Crustacea (Daphnia magna) EC50=0.026mg/L/48hr (EHC 200 1998)  
Aquatic chronic toxicity component(s) data  
[GHS Cat. Japan, base data]  
(Copper(II)oxide)  
Algae (Pseudokirchneriella subcapitata) NOEC=0.2 ppb (US EPA: RED, 2009)  
Water solubility  
(Copper(I) oxide)  
none (ICSC, 1997)  
(Copper)  
none (ICSC, 1993)  
Persistence and degradability  
Persistence and degradability data is not available.  
Bioaccumulative potential  
Bioaccumulative potential data is not available.  
Mobility in soil  
Mobility in soil data is not available.  
Other adverse effects  
Ozone depleting chemical data is not available.

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### 13. Disposal considerations

#### Waste treatment methods

Avoid release to the environment (- if this is not the intended use).  
Dispose of contents/container in accordance with local/national regulation.

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### 14. Transport Information

UN No.: 3077  
Proper Shipping Name :  
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
Class or division : 9  
Packing group : III  
ERG GUIDE No.: 171  
Special provisions No.: 274; 331; 335; 375

#### IMDG Code (International Maritime Dangerous Goods Regulations)

UN No.: 3077  
Proper Shipping Name :  
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
Class or division : 9  
Packing group : III  
Special provisions No.: 274; 335; 966; 967; 969

#### IATA Dangerous Goods Regulations

UN No.: 3077  
Proper Shipping Name :  
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
Class or division : 9  
Hazard labels : Miscellaneous  
Packing group : III  
Special provisions No.: A97; A158; A179; A197

#### Environmental hazards

MARPOL Annex III – Prevention of pollution by harmful substances



Marine pollutants (yes/no) : yes  
MARPOL Annex V – Prevention of pollution by garbage discharge  
Hazardous to the aquatic environment – acute hazard: cat.1  
Copper(I) oxide , Copper(II)oxide  
Hazardous to the aquatic environment – long-term hazard: cat.1, 2  
Copper(I) oxide , Copper(II)oxide

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#### 15. Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

US major regulations

TSCA

Copper(II)oxide; Copper(I) oxide; Copper

Other regulatory information

Ensure this material in compliance with federal requirements and ensure conformity to local regulations.

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#### 16. Other information

GHS classification and labelling

Acute Tox. 4: H302 Harmful if swallowed

Acute Tox. 4: H332 Harmful if inhaled

Eye Irrit. 2: H319 Causes serious eye irritation

Skin Sens. 1: H317 May cause an allergic skin reaction

STOT SE 1: H370 Causes damage to organs after single exposure

STOT SE 3: H335 May cause respiratory irritation

Aquatic Acute 1: H400 Very toxic to aquatic life

Aquatic Chronic 1: H410 Very toxic to aquatic life with long lasting effects

Reference Book

Globally Harmonized System of classification and labelling of chemicals, (6th ed., 2015), UN

Recommendations on the TRANSPORT OF DANGEROUS GOODS 20th edit., 2017 UN

IMDG Code, 2018 Edition (Incorporating Amendment 39-18)

IATA Dangerous Goods Regulations (60th Edition) 2019

Classification, labelling and packaging of substances and mixtures (table3-1 ECNO6182012)

2016 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2019 TLVs and BEIs. (ACGIH)

<http://monographs.iarc.fr/ENG/Classification/index.php>

Supplier's data/information

General Disclaimer

This data sheet was created based on the information we currently have and may be revised according to new information. In addition, the precautions apply only to normal handling, and in the case of special handling, please make adequate countermeasure to maintain your safety.

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.

The GHS classification data given here is based on current Japan official data (NITE published in 2018).