

Otto Chemie Pvt Ltd

An ISO 9001 : 2015 & GMP Certified Company
Office : No 603, 6th Floor, Tardeo AC Market, 87, Tardeo Road,
Tardeo, Mumbai, Maharashtra 400034, India (BHARAT)
Tel : + 91 98200 41841 Email : info@ottokemi.com Web : www.ottokemi.com

Creation Date: 20-08-2026

Revision Date: 18-07-2021

MATERIAL SAFETY DATA SHEET (MSDS)

SECTION 1: Product identifiers

Product Name: Copper foil, 2.5 µm thick, 99.9%
Product Code: C 4060
CAS No: 7440-50-8

1.2. Relevant identified uses of the substance or mixture and uses advised against
Use : Industrial. For professional use only.

1.3. Details of the supplier of the safety data sheet
Company identification
OTTO CHEMIE PVT LTD
No 603, 6th Floor, Tardeo AC Market, 87, Tardeo Road,
Tardeo, Mumbai, Maharashtra 400034, India (BHARAT)

1.4. Emergency telephone number
Phone no. : + 91 98200 41841 (10 : 00 am – 06 : 00 pm)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Classification (REGULATION (EC) No 1272/2008)

Short-term (acute) aquatic hazard,
Category

H400: Very toxic to aquatic life.

Long-term (chronic) aquatic hazard,
Category 1

H410: Very toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms

Signal word

Hazard statements

Precautionary statements

: Warning

: H410 Very toxic to aquatic life with long lasting effects.

Prevention:

P273 Avoid release to the environment.

Response:

P391 Collect spillage.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Reduced Labelling (<= 125 ml)

Hazard pictograms

Signal word

Hazard Statements

Precautionary Statements

Supplemental Hazard

Statements

:

Warning

none

none

none

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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SECTION 3: Composition/information on ingredients

3.1 Substances

EC-No. : 231-159-6

Components

Chemical name	CAS-No. EC-No.	Concentration (%) w/w)	M-Factor, SCL, ATE
Copper	7440-50-8 231-159-6	>= 90 - <= 100	M-Factor (Acute aquatic toxicity): 10 M-Factor (Chronic aquatic toxicity): 1

SECTION 4: First aid measures

4.1 Description of first aid measures

If inhaled : After inhalation: fresh air.

In case of skin contact : In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

In case of eye contact : After eye contact: rinse out with plenty of water.

Remove contact lenses.

If swallowed : After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

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

Water

Foam

Carbon dioxide (CO₂)

Dry powder

Unsuitable extinguishing : For this substance/mixture no limitations of media extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire fighting

Combustible.

Development of hazardous combustion gases or vapours possible in the event of fire.

Hazardous combustion products

Copper oxides

5.3 Advice for firefighters

Special protective

equipment for firefighters

In the event of fire, wear self-contained breathing apparatus.

Further information : Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : 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

Environmental precautions

Do not let product enter drains.

6.3 Methods and material for containment and cleaning up

Methods for 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 considerations see section 13.

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SECTION 7: Handling and storage

7.1 Precautions for safe handling

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

Further information on : Tightly closed. Keep away from heat and sources of storage conditions ignition.

Storage class (TRGS 510) : 4.1B, Flammable solid hazardous materials

Recommended storage temperature

Recommended storage temperature see product label.

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

Occupational Exposure Limits

8.2 Exposure controls

Individual protection measures, such as personal protective equipment (PPE)

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

Hand protection

Material : Nitrile rubber

Break through time : 480 min

Glove thickness : 0,11 mm

Protective index : Full contact

Manufacturer : KCL 741 Dermatril® L

Material : Nitrile rubber

Break through time : 480 min

Glove thickness : 0,11 mm

Protective index : Splash contact

Manufacturer : KCL 741 Dermatril® L

Remarks : This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D36124 Eichenzell, Internet: www.kcl.de).

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.

Recommended Filter type: Filter type P1

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.

These measures have to be properly documented.

Environmental exposure controls

Advice : Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state

: Foil

Form

: powder

Colour

: copper, coloured

Odour

: odourless

Melting point/ range

: 1.083,4 °C

Method: lit.

Boiling point/boiling range

: 2.567 °C

Method: lit.

Flammability

: Method: Regulation (EC) No. 440/2008, Annex, A.10

Remarks: The product is not flammable.

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Upper explosion limit /	: No data available
Upper flammability limit	
Lower explosion limit /	: No data available
Lower flammability limit	
Flash point	: Not applicable
Autoignition temperature	: No data available
Decomposition	: No data available
temperature	
pH	: No data available
Viscosity, dynamic	: No data available
Viscosity, kinematic	: No data available
Flow time	: No data available
Solubility(ies)	
Water solubility	: insoluble
Partition coefficient: noctanol/water	: Not applicable for inorganic substances
Vapour pressure	: No data available
Relative density	: No data available
Density	: 8,94 g/cm ³ (25 °C)
	Method: lit.
Relative vapour density	: No data available
9.2 Other information	
Explosives	: Not explosive
Oxidizing properties	: none
Burning rate	: No data available
Evaporation rate	: No data available
Molecular weight	: 63,55 g/mol

SECTION 10: Stability and reactivity

10.1 Reactivity

The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

10.2 Chemical stability

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

10.3 Possibility of hazardous reactions

Hazardous reactions : Exothermic reaction with:

Ethylene oxide

Fluorine

hydrogen sulphide

halogen-halogen compounds

alkali oxides

nitrides

Salts of hydrazine

Sulfuric acid

Risk of ignition or formation of inflammable gases or

vapours with:

Oxidizing agents

Chlorine

Risk of explosion with:

Acetylene

azides

ammonium compounds

iodates

bromopropine

perchlorates

bromates

picrates

chlorates

Peroxides

10.4 Conditions to avoid

Conditions to avoid : no information available

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10.5 Incompatible materials

No data available

10.6 Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Toxicity to Animals:

Oral LD50 Rat: 1500 mg/kg; Dermal LD50 Rabbit: 2000mg/kg Inhalation LC50 Rat: > 50mg/L.

Chronic Effects on Humans: CARCINOGENIC EFFECTS: Classified None. by NTP, None. by OSHA, None. by NIOSH.

Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant), of inhalation (lung irritant).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans: Not available.

SECTION 12: Ecological information

12.1 Toxicity

Components:

Copper:

Toxicity to fish : LOEC (Oncorhynchus mykiss (rainbow trout)): 0,022 mg/l

Exposure time: 96 h

Test Type: mortality

LC50 (Oncorhynchus mykiss (rainbow trout)): 0,15 mg/l

Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates

NOEC (Daphnia (water flea)): 0,004 mg/l

Exposure time: 24 h

Test Type: mortality

EC50 (Daphnia magna (Water flea)): 0,04 - 0,05 mg/l

Exposure time: 48 h

M-Factor (Acute aquatic toxicity) 10

Toxicity to fish (Chronic toxicity)

NOEC: 0,024 mg/l

Exposure time: 60 d

Species: Oncorhynchus mykiss (rainbow trout)

Test Type: mortality

M-Factor (Chronic aquatic toxicity) 1

12.2 Persistence and degradability

Components:

Copper:

Biodegradability : Remarks: Not applicable

12.3 Bioaccumulative potential

Components:

Copper:

Partition coefficient: noctanol/water

Remarks: Not applicable for inorganic substances

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components

considered to be either persistent, bioaccumulative

and toxic (PBT), or very persistent and very

bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

Product:

Assessment

: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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12.7 Other adverse effects
No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

SECTION 14: Transport information

14.1 UN number or ID number

ADR : UN 3077
IMDG : UN 3077
IATA : UN 3077

14.2 UN proper shipping name

ADR : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Copper)
IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Copper)
IATA : Environmentally hazardous substance, solid, n.o.s. (Copper)

14.3 Transport hazard class(es)

	Class	Subsidiary risks
ADR	: 9	
IMDG	: 9	
IATA	: 9	

14.4 Packing group

ADR	
Packing group	: III
Classification Code	: M7
Hazard Identification Number	: 90
Labels	: 9
Tunnel restriction code	: (-)
IMDG	
Packing group	: III
Labels	: 9
EmS Code	: F-A, S-F
IATA (Cargo)	
Packing instruction (cargo aircraft)	: 956
Packing instruction (LQ)	: Y956
Packing group	: III
Labels	: Class 9 - Miscellaneous dangerous substances and articles

IATA_P (Passenger)

Packing instruction (passenger aircraft)	: 956
Packing instruction (LQ)	: Y956
Packing group	: III
Labels	: Class 9 - Miscellaneous dangerous substances and articles

14.5 Environmental hazards

ADR

Environmentally hazardous	: yes
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IMDG

Marine pollutant	: yes
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14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)

Conditions of restriction for the following entries should be considered:

Number on list 75

If you intend to use this product as tattoo ink, please contact your vendor.

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).

Not applicable

Regulation (EU) No 2024/590 on substances that deplete the ozone layer

Not applicable

Regulation (EU) 2019/1021 on persistent organic pollutants (recast)

Not applicable

REACH - List of substances subject to : Not applicable authorisation (Annex XIV)

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

E1 ENVIRONMENTAL HAZARDS

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out

SECTION 16: Other Information

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.

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