



(6N) 99.9999% Copper Metal	Pricing >
Copper Balls	Pricing >
Copper Band	Pricing >
Copper Bars	Pricing >
Copper Beads	Pricing >
Copper Block	Pricing >
Copper Busbars	Pricing >
Copper Cathode Plates	Pricing >
Copper Cathode Squares	Pricing >
Copper Cathodes	Pricing >
Copper Chunk	Pricing >
Copper Coil	Pricing >
Copper Concentrate	Pricing >
Copper Conductor Paste	Pricing >
Copper Crucibles	Pricing >
Copper Cube	Pricing >
Copper Cuttings	Pricing >
Copper Cylinder	Pricing >
Copper Disc	Pricing >
Copper Electrode	Pricing >
Copper Flake	Pricing >
Copper Flange	Pricing >
Copper Foam	Pricing >
Copper Foil	Pricing >
Copper Gauze	Pricing >
Copper Granules	Pricing >
Copper Honeycomb	Pricing >
Copper Ingot	Pricing >
Copper Ink	Pricing >
Copper Inquarts	Pricing >

Copper Insulated Wire	Pricing >
Copper Lump	Pricing >
Copper Mesh	Pricing >
Copper Metal	Pricing >
Copper Nanoparticle Dispersion	Pricing >
Copper Nanoparticles	Pricing >
Copper Nanorods	Pricing >
Copper Nanotubes	Pricing >
Copper Nanowire Dispersion	Pricing >
Copper Nanowires	Pricing >
Copper Particles	Pricing >
Copper Parts	Pricing >
Copper Pellets	Pricing >
Copper Pieces	Pricing >
Copper Plate	Pricing >
Copper Powder	Pricing >
Copper Puck	Pricing >
Copper Punchings	Pricing >
Copper Ribbon	Pricing >
Copper Ring	Pricing >
Copper Rod	Pricing >
Copper Rotatable Sputtering Target	Pricing >
Copper Samples	Pricing >
Copper Shavings	Pricing >
Copper Sheet	Pricing >
Copper Shot	Pricing >
Copper Single Crystal	Pricing >
Copper Sleeves	Pricing >
Copper Slugs	Pricing >
Copper Specimen	Pricing >
Copper Spheres	Pricing >
Copper Sponge	Pricing >
Copper Spring	Pricing >
Copper Sputtering Target	Pricing >

Copper Strip	Pricing >
Copper Tape	Pricing >
Copper Tube	Pricing >
Copper Turnings	Pricing >
Copper Wafer	Pricing >
Copper Wire	Pricing >
Copper Wool	Pricing >
Silver Coated Copper Powder	Pricing >
Ultra Thin Copper Nanoscale Foil	Pricing >

Linear Formula	Cu
Pubchem CID	23978
MDL Number	MFCD00010965
EC No.	231-159-6
Beilstein/Reaxys No.	N/A
SMILES	[Cu]
Inchl Identifier	InChI=1S/Cu
Inchl Key	RYGMFSIKBFXOCR-UHFFFAOYSA-N

Signal Word	Danger
Hazard Statements	H228-H400
Hazard Codes	F
Risk Codes	11
Safety Statements	16
RTECS Number	GL5325000
Transport Information	UN 3089 4.1/PG 2
WGK Germany	3
GHS Pictograms	GHS02 Flame  GHS07 Exclamation Point 

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SAFETY DATA SHEET

Date Accessed: 04/18/2024

Date Revised: 01/15/2022

SECTION 1. IDENTIFICATION

Product Identifiers: All applicable American Elements product codes for CAS #7440-50-8

Relevant identified uses of the substance:
Scientific research and development

Supplier details:
American Elements
10884 Weyburn Ave.
Los Angeles, CA 90024
Tel: +1 310-208-0551
Fax: +1 310-208-0351

Emergency telephone number:
Domestic, North America +1 800-424-9300
International +1 703-527-3887

SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008
The substance is not classified as hazardous to health or the environment according to the CLP regulation.
Classification according to Directive 67/548/EEC or Directive 1999/45/EC
N/A
Information concerning particular hazards for human and environment:
No data available
Hazards not otherwise classified
No data available
Label elements
Labelling according to Regulation (EC) No 1272/2008
N/A
Hazard pictograms
N/A
Signal word
N/A
Hazard statements
N/A
WHMIS classification
Not controlled
Classification system
HMIS ratings (scale 0-4)
(Hazardous Materials Identification System)

Health (acute effects) = 0
Flammability = 0
Physical Hazard = 0
Other hazards
Results of PBT and vPvB assessment
PBT: N/A
vPvB: N/A

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances
CAS No. / Substance Name:
7440-50-8 Copper
Identification number(s):
EC number: 231-159-6

SECTION 4. FIRST AID MEASURES

Description of first aid measures
General information
No special measures required.
If inhaled:
Seek medical treatment in case of complaints.
In case of skin contact:
Generally the product does not irritate the skin.
In case of eye contact:
Rinse opened eye for several minutes under running
water. If symptoms persist, consult a doctor.
If swallowed:
If symptoms persist consult doctor.
Information for doctor
Most important symptoms and effects, both acute and
delayed
No data available
Indication of any immediate medical attention and
special treatment needed
No data available

SECTION 5. FIREFIGHTING MEASURES

Extinguishing media
Suitable extinguishing agents
Special powder for metal fires. Do not use water.
For safety reasons unsuitable extinguishing agents
Water
Special hazards arising from the substance or mixture
If this product is involved in a fire, the following can be
released:
Copper oxides

Advice for firefighters
Protective equipment:
No special measures required.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
Not required.
Environmental precautions:
Do not allow material to be released to the environment without official permits.
Do not allow product to enter drains, sewage systems, or other water courses.
Do not allow material to penetrate the ground or soil.
Methods and materials for containment and cleanup:
Pick up mechanically.
Prevention of secondary hazards:
No special measures required.
Reference to other sections
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7. HANDLING AND STORAGE

Handling
Precautions for safe handling
Keep container tightly sealed.
Store in cool, dry place in tightly closed containers.
Information about protection against explosions and fires:
No special measures required.
Conditions for safe storage, including any incompatibilities
Requirements to be met by storerooms and receptacles:
No special requirements.
Information about storage in one common storage facility:
No data available
Further information about storage conditions:
Keep container tightly sealed.
Store in cool, dry conditions in well-sealed containers.
Specific end use(s)
No data available

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Additional information about design of technical systems:

No further data; see section 7.

Control parameters

Components with limit values that require monitoring at the workplace: 7440-50-8 Copper (100.0%)

PEL (USA) Long-term value: $1 \times 0.1^{**} \text{ mg/m}^3$ as Cu
*dusts and mists **fume

REL (USA) Long-term value: $1 \times 0.1^{**} \text{ mg/m}^3$ as Cu
*dusts and mists **fume

TLV (USA) Long-term value: $1 \times 0.2^{**} \text{ mg/m}^3$ *dusts and mists; **fume; as Cu

EL (Canada) Long-term value: $1 \times 0.2^{**} \text{ mg/m}^3$ *dusts and mists; **fume

EV (Canada) Long-term value: $0.2 \times 1^{**} \text{ mg/m}^3$ as copper, *fume;**dust and mists

Additional information: No data

Exposure controls

Personal protective equipment

Follow typical protective and hygienic practices for handling chemicals.

Maintain an ergonomically appropriate working environment.

Breathing equipment: Not required.

Protection of hands: Not required.

Penetration time of glove material (in minutes)

No data available

Eye protection: Safety glasses

Body protection: Protective work clothing.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance:

Form: Solid in various forms

Color: Copper colored

Odor: Odorless

Odor threshold: No data available.

pH: N/A

Melting point/Melting range: $1083 \text{ }^{\circ}\text{C}$ ($1981 \text{ }^{\circ}\text{F}$)

Boiling point/Boiling range: $2562 \text{ }^{\circ}\text{C}$ ($4644 \text{ }^{\circ}\text{F}$)

Sublimation temperature / start: No data available

Flammability (solid, gas): No data available.

Ignition temperature: No data available

Decomposition temperature: No data available

Autoignition: No data available.

Danger of explosion: No data available.

Explosion limits:
Lower: No data available
Upper: No data available
Vapor pressure at 20 °C (68 °F): 0 hPa
Density at 20 °C (68 °F): 8.94 g/cm³ (74.604 lbs/gal)
Relative density: No data available.
Vapor density: N/A
Evaporation rate: N/A
Solubility in Water (H₂O): Insoluble
Partition coefficient (n-octanol/water): No data available.
Viscosity:
Dynamic: N/A
Kinematic: N/A
Other information
No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity
No data available
Chemical stability
Stable under recommended storage conditions
Thermal decomposition / conditions to be avoided:
Decomposition will not occur if used and stored according to specifications.
Possibility of hazardous reactions
No dangerous reactions known
Conditions to avoid
No data available
Incompatible materials:
No data available
Hazardous decomposition products:
Copper oxides

SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects
Acute toxicity:
The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for this substance.
LD/LC50 values that are relevant for classification:
Oral LD50 >5000 mg/kg (mouse)
Skin irritation or corrosion: No irritant effect.
Eye irritation or corrosion: No irritant effect.
Sensitization: No sensitizing effects known.
Germ cell mutagenicity: No effects known.
Carcinogenicity:
EPA-D: Not classifiable as to human carcinogenicity:

inadequate human and animal evidence of carcinogenicity or no data are available.
The Registry of Toxic Effects of Chemical Substances (RTECS) contains tumorigenic and/or carcinogenic and/or neoplastic data for this substance.
Reproductive toxicity:
The Registry of Toxic Effects of Chemical Substances (RTECS) contains reproductive data for this substance.
Specific target organ system toxicity - repeated exposure: No effects known.
Specific target organ system toxicity - single exposure: No effects known.
Aspiration hazard: No effects known.
Subacute to chronic toxicity: No effects known.
Additional toxicological information:
To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.
Carcinogenic categories
OSHA-Ca (Occupational Safety & Health Administration)
Substance is not listed.

SECTION 12. ECOLOGICAL INFORMATION

Toxicity
Aquatic toxicity:
No data available
Persistence and degradability
No data available
Bioaccumulative potential
No data available
Mobility in soil
No data available
Additional ecological information:
Do not allow material to be released to the environment without official permits.
Do not allow undiluted product or large quantities to reach groundwater, water courses, or sewage systems.
Avoid transfer into the environment.
Results of PBT and vPvB assessment
PBT: N/A
vPvB: N/A
Other adverse effects
No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Recommendation
Consult official regulations to ensure proper disposal.
Uncleaned packagings:
Recommendation:
Disposal must be made according to official regulations.

SECTION 14. TRANSPORT INFORMATION

UN-Number
DOT, ADN, IMDG, IATA
N/A
UN proper shipping name
DOT, ADN, IMDG, IATA
N/A
Transport hazard class(es)
DOT, ADR, ADN, IMDG, IATA
Class
N/A
Packing group
DOT, IMDG, IATA
N/A
Environmental hazards:
Marine pollutant (IMDG):
Yes (PP)
Yes (P)
Special precautions for user
N/A
Transport in bulk according to Annex II of
MARPOL73/78 and the IBC Code
N/A
Transport/Additional information:
DOT
Marine Pollutant (DOT):
No

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental
regulations/legislation specific for the substance or
mixture
National regulations
All components of this product are listed in the U.S.
Environmental Protection Agency Toxic Substances
Control Act Chemical substance Inventory.
All components of this product are listed on the
Canadian Domestic Substances List (DSL).
SARA Section 313 (specific toxic chemical listings)
7440-50-8 Copper
California Proposition 65

Prop 65 - Chemicals known to cause cancer
Substance is not listed.
Prop 65 - Developmental toxicity
Substance is not listed.
Prop 65 - Developmental toxicity, female
Substance is not listed.
Prop 65 - Developmental toxicity, male
Substance is not listed.
Information about limitation of use:
For use only by technically qualified individuals.
Other regulations, limitations and prohibitive
regulations
Substance of Very High Concern (SVHC) according to
the REACH Regulations (EC) No. 1907/2006.
Substance is not listed.
The conditions of restrictions according to Article 67
and Annex XVII of the Regulation (EC) No 1907/2006
(REACH) for the manufacturing, placing on the market
and use must be observed.
Substance is not listed.
Annex XIV of the REACH Regulations (requiring
Authorisation for use)
Substance is not listed.
REACH - Pre-registered substances
Substance is listed.
Chemical safety assessment:
A Chemical Safety Assessment has not been carried
out

16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. American Elements shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. COPYRIGHT 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.