

Copper Tungsten Alloy

## SAFETY DATA SHEET

### 1 PRODUCT AND SUPPLIER IDENTIFICATION

Product Name: Copper-Tungsten Alloy - sheet, foil, rod, pellets

Other: Copper-W, Tungsten-Copper Alloy, Tungsten-Cu

Supplier: Stanford Advanced Materials

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Recommended Uses: Scientific Research

### 2 HAZARDS IDENTIFICATION

GHS Classification (29 CFR 1910.1200): Not classified as hazardous

GHS Label Elements:

Signal Word: N/A

Hazard Statements: N/A

Precautionary Statements: N/A

### 3 COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient:	CAS#:	%:	EC#:
Copper	7440-50-8	20-60	231-159-6
Tungsten	7440-33-7	40-80	231-143-9

### 4 FIRST AID MEASURES

General Measures: Under normal handling and use, exposure to solid forms of this material present few health hazards. Subsequent operations such as grinding, melting or welding may produce potentially hazardous dust or fumes which can be inhaled or come in contact with the skin or eyes.

INHALATION: Remove to fresh air, keep warm and quiet, give oxygen if breathing is difficult. Seek medical attention.

INGESTION: Rinse mouth with water. Do not induce vomiting. Seek medical attention. Never induce vomiting or give anything by mouth to an unconscious person.

SKIN: Remove contaminated clothing, brush material off skin, wash affected area with soap and water. Seek medical attention if symptoms persist.

EYES: Flush eyes with lukewarm water, including under upper and lower eyelids, for at least 15 minutes. Seek medical attention if symptoms persist.

Most Important Symptoms/Effects, Acute and Delayed: May cause irritation. See section 11 for more information.

Indication of Immediate Medical Attention and Special Treatment: No other relevant information available.

## 5 FIREFIGHTING MEASURES

Extinguishing Media: Use suitable extinguishing media for surrounding material and type of fire.

Unsuitable Extinguishing Media: No information available.

Specific Hazards Arising from the Material: This product does not present fire or explosion hazards as shipped. Small chips, fine turnings and dust from processing may be ignitable. May emit metal oxide fumes under fire conditions.

Special Protective Equipment and Precautions for Firefighters: Full face, self-contained breathing apparatus and full protective clothing when necessary.

## 6 ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures: Wear appropriate respiratory and protective equipment specified in section 8. Avoid dust formation. Avoid contact with skin and eyes. Avoid breathing dust or fume.

Methods and Materials for Containment and Cleaning Up: Sweep or scoop up. Place in a closed container for further handling and disposal. Scrap can be collected for recycling.

Environmental Precautions: Do not allow to enter drains or to be released to the environment.

## 7 HANDLING AND STORAGE

Precautions for Safe Handling: Avoid creating dust. Provide adequate ventilation if dusts are created. See section 8 for information on personal protection equipment.

Conditions for Safe Storage: Store in a sealed container. Store in a cool, dry area. See section 10 for more information on incompatible materials.

## 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Limits:	OSHA/PEL:	ACGIH/TLV:
Copper	0.1 mg/m <sup>3</sup>	0.2 mg/m <sup>3</sup>
Tungsten	5 mg/m <sup>3</sup>	5 mg/m <sup>3</sup>

Engineering Controls: Ensure adequate ventilation to maintain exposures below occupational limits. Whenever possible the use of local exhaust ventilation or other engineering controls is the preferred method of controlling exposure to airborne dust and fume to meet established occupational exposure limits. Use good housekeeping and sanitation practices. Do not use tobacco or food in work area. Wash thoroughly before eating or smoking. Do not blow dust off clothing or skin with compressed air.

Respiratory Protection: If permissible levels are exceeded, use NIOSH approved dust respirator.

Eye Protection: Safety glasses

Skin Protection: Wear impermeable gloves, protective work clothing as necessary.

## 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:

Form:	Solid in various forms
Color:	Silvery metallic, high copper alloys will have a copper sheen
Odor:	Odorless
Odor Threshold:	Not determined
pH:	N/A
Melting Point:	No data
Boiling Point:	No data
Flash Point:	N/A

Evaporation Rate: N/A

Flammability: No data

Upper Flammable Limit: No data

Lower Flammable Limit: No data

Vapor Pressure: No data

Vapor Density: N/A

Relative Density (Specific Gravity): ~12 - 17 g/cc

Solubility in H<sub>2</sub>O: Insoluble

Partition Coefficient (n-octanol/water): Not determined

Autoignition Temperature: No data

Decomposition Temperature: No data

Viscosity: N/A

## 10 STABILITY AND REACTIVITY

Reactivity: No data

Chemical Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: No data

Conditions to Avoid: Avoid creating or accumulating fines or dusts.

Incompatible Materials: Acids, oxidizers.

Hazardous Decomposition Products: Metal oxide fume.

## 11 TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Inhalation, skin, eyes. Product as shipped does not present an inhalation hazard; however subsequent operations may create dusts or fumes which could be inhaled.

Symptoms of Exposure: Fines/dusts may irritate skin and eyes.

Acute and Chronic Effects:

Copper: Copper is a trace element that is essential for human health. Chronic exposure to copper dust can irritate the respiratory tract, nose, mouth and eyes, and cause headaches, dizziness, nausea and diarrhea. Ingestion of excessive amounts of copper may cause gastrointestinal distress. Chronic ingestion may damage the liver and kidneys.

Tungsten: No data

Acute Toxicity: No data

Carcinogenicity: No components of this alloy have been identified by NTP or IARC as carcinogenic.

To the best of our knowledge the chemical, physical and toxicological characteristics of the substance are not fully known.

## 12 ECOLOGICAL INFORMATION

Ecotoxicity: No data

Persistence and Degradability: No data

Bioaccumulative Potential: No data

Mobility in Soil: No data

Other Adverse Effects: No further relevant information available.

### 13 DISPOSAL CONSIDERATIONS

Waste Disposal Method:

Product: Dispose of in accordance with Federal, State and Local regulations.

Packaging: Dispose of in accordance with Federal, State and Local regulations.

### 14 TRANSPORT INFORMATION

Shipping Regulations: Not regulated

UN Number: N/A

UN Proper Shipping Name: N/A

Transport Hazard Class: N/A

Packing Group: N/A

Marine Pollutant: No

### 15 REGULATORY INFORMATION

TSCA Listed: All components are listed.

Regulation (EC) No 1272/2008 (CLP): N/A

Canada WHMIS Classification (CPR, SOR/88-66): N/A

HMIS Ratings: Health: 0      Flammability: 0      Reactivity: 0

NFPA Ratings: Health: 0      Flammability: 0      Reactivity: 0

Chemical Safety Assessment: A chemical safety assessment has not been carried out.

## 16 OTHER INFORMATION

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