



Silver Flashed Copper Bar

SECTION 1: IDENTIFICATION

Product Identifiers: Silver Flashed Copper Bar

Intended Use of the Product: Manufacture of copper alloy products for, but not limited to, architecture, automotive, building, consumer; electrical.

Name, Address, and Telephone of the Manufacturer: Revere Copper Products, One Revere Park, Rome, NY 13440

Emergency Telephone Number: 800-448-1776 or 315-338-2022

SECTION 2: HAZARDS IDENTIFICATION

Solid copper and copper alloys, in massive form (rod, plate, sheet, strip, bar), are not hazardous.

GHS-US Classification: Not classified

GHS-US Labeling: No labeling applicable

Hazards Not Otherwise Classified:

When processed by milling, grinding, welding, melting, sawing, brazing, burning or other similar processes the generated dust, fines, fume or mist may pose a hazard through inhalation, ingestion or by eye or skin contact.

- Fine particles or dust dispersed in the air may present a fire/explosion hazard.
- Exposure to fumes or dust may aggravate existing respiratory disease or dermatitis.
- This product contains components that are environmentally hazardous and small chips, turnings and dust from processing may be toxic to aquatic life.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Product Form: Mixture

Name	Product Identifier	% (w/w)	Classification (GHS-US)
Copper	(CAS No) 7440-50-8	99.9	Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Silver	(CAS No) 7440-22-4	< 0.1	Eye Irrit. 2A, H319 STOT SE 3, H335 Aquatic Acute 1, H400

Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES

Solid copper and copper alloys in massive form (rod, plate, sheet, strip, bar), do not present inhalation, ingestion, eye contact or skin contact hazards. The information below relates to the dust, fines, fumes or mists generated by subsequent processing.

Description of First Aid Measures:

- General:** Never give anything by mouth to an unconscious person. If medical advice is needed, have this SDS at hand.
- Inhalation:** Remove to fresh air and keep at rest in a position comfortable for breathing. If symptoms develop seek medical attention.
- Skin Contact:** Do not rub. Wash with plenty of soap and water. Promptly treat cuts or abrasions by thorough cleaning of the affected area. Contact with hot or molten metal will cause thermal burns, cool rapidly and seek medical attention.
- Eye Contact:** Do not rub. Thoroughly flush eyes with water for at least 15 minutes, including under lids, to remove all particles. Seek immediate medical attention for abrasions or other injuries to the eye.
- Ingestion:** Rinse mouth. Drink water to dilute. Seek medical attention if symptoms develop or you feel ill.

Most Important Symptoms and Effects both Acute and Delayed:

- Inhalation:** Short term exposure to fumes or dust may produce irritation of the mucous membranes and respiratory system. Exposure to metal fumes can produce an acute allergic condition known as "metal fume fever". Symptoms may include chills, muscle aches, nausea, fever, dry throat, cough, weakness, and lassitude. The onset of symptoms

may be delayed several hours and recovery generally occurs without intervention within 24 to 48 hours.

- Skin Contact:** Contact with fumes or metal powder may irritate skin. Contact with hot, molten metal will cause thermal burns. Injury from flying particles is possible.
- Eye Contact:** Short term exposure to fumes or dusts may cause eye irritation. Mechanical injury can result from particulate.
- Ingestion:** Ingestion of dust may cause nausea, vomiting, abdominal pain, metallic taste and diarrhea. Ingestion of large doses may cause stomach and intestine ulceration, jaundice and kidney or liver damage.

SECTION 5: FIRE-FIGHTING MEASURES

- Suitable Extinguishing Media:** Solid products are not flammable or explosive, use extinguishing media appropriate for surrounding fire.
Use Class D extinguishing agents or dry sand on fires involving dust or fines.
- Unsuitable Extinguishing Media:** Do NOT use water on molten material, will react violently due to steam explosions. Do NOT use water or halogenated extinguishing agents on fires involving dust or fines.
- Specific Hazards Arising From Material:** Dusts or fines may burn if they are ignited.
Fumes may contain oxides of copper and other ingredients.
Fine particles or dust dispersed in the air may present a fire/explosion hazard.
Use of water on molten material will cause steam explosions.
- Special Protective Equipment and Precautions for Firefighters:** Do not breathe fumes from fires or vapors from decomposition, wear self-contained NIOSH approved breathing apparatus. Wear full protective clothing.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Not applicable to copper and copper alloys in the massive form. The information below relates to the dust or fines generated by processing.

- Personal Precautions, Protective Equipment and Emergency Procedures:** Avoid generation of airborne dust. Ensure adequate ventilation. Protect clean-up personnel from inhalation of dusts or fumes, or contact with eyes and skin.
- Environmental Precautions:** Do not flush dust or fines to surface waters, soil or sanitary sewer system.
- Methods / Material for Containment and Clean Up:** Dust and fines should be cleaned up avoiding generation of airborne particulates. Wash down with water if in contact with acids.
- Reference to Other Sections :** See Sec 8 and Sec 13.

SECTION 7: HANDLING AND STORAGE

- Precautions for Safe Handling:** As sold in the massive form, copper and copper alloys pose no chemical handling hazard. Avoid contact with sharp edges, where proper gloves when handling.
Dust, fines, fume or mist generated by processing may pose a hazard through inhalation, ingestion and eye or by skin contact. Avoid breathing metal fumes and/or dust. Practice good housekeeping. Practice good hygiene. Avoid generating dusts. Eating, drinking or smoking should not be allowed in areas where these alloys are processed.
- Conditions for Safe Storage:** Other than incompatibles, no special storage conditions for copper in the massive form.
- Incompatible Materials:** Strong acids. Strong bases. Strong oxidizers. Halogens. Mercury.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

- Appropriate Engineering Controls:** Use appropriate engineering controls to minimize exposure to airborne concentrations during chemical treatment, milling, grinding, welding, melting, sawing, brazing, burning or other similar processes.
Provide emergency eye wash fountains and safety showers in the immediate vicinity of any

potential exposure.

Personal Protective Equipment:	Highly dependent upon process being performed. User must review every process individually to evaluate appropriate PPE. Do not eat, drink or smoke during processing operations.
Respiratory Protection:	As appropriate for process and engineering controls in place.
Eye Protection:	Safety glasses, chemical goggles or face shield as appropriate to process.
Hand Protection:	Cut resistant gloves whenever handling. Chemically resistant gloves or thermally resistant gloves as appropriate to process.
Skin and Body Protection:	Wear suitable protective clothing. With molten material wear thermally protective clothing.
Hygiene Measures:	Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not eat, drink or smoke when using this product. Always wash your hands immediately after handling this product.

Control Parameters

For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), OSHA (PEL), Canadian provincial governments, or the Mexican government.

Copper (7440-50-8)		
Mexico	OEL TWA (mg/m ³)	0.2 mg/m ³ (fume) 1 mg/m ³ (dust and mist)
Mexico	OEL STEL (mg/m ³)	2 mg/m ³ (fume) 2 mg/m ³ (dust and mist)
USA ACGIH	ACGIH TWA (mg/m ³)	0.2 mg/m ³ (fume)
USA OSHA	OSHA PEL (TWA) (mg/m ³)	0.1 mg/m ³ (fume) 1 mg/m ³ (dust and mist)
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	1 mg/m ³ (dust and mist) 0.1 mg/m ³ (fume)
USA IDLH	US IDLH (mg/m ³)	100 mg/m ³ (dust, fume and mist)
Alberta	OEL TWA (mg/m ³)	0.2 mg/m ³ (fume) 1 mg/m ³ (dust and mist)
British Columbia	OEL TWA (mg/m ³)	1 mg/m ³ (dust and mist) 0.2 mg/m ³ (fume)
Manitoba	OEL TWA (mg/m ³)	0.2 mg/m ³ (fume)
New Brunswick	OEL TWA (mg/m ³)	0.2 mg/m ³ (fume) 1 mg/m ³ (dust and mist)
Newfoundland & Labrador	OEL TWA (mg/m ³)	0.2 mg/m ³ (fume)
Nova Scotia	OEL TWA (mg/m ³)	0.2 mg/m ³ (fume)
Nunavut	OEL STEL (mg/m ³)	0.6 mg/m ³ (fume) 2 mg/m ³ (dust and mist)
Nunavut	OEL TWA (mg/m ³)	0.2 mg/m ³ (fume) 1 mg/m ³ (dust and mist)
Northwest Territories	OEL STEL (mg/m ³)	0.6 mg/m ³ (fume) 2 mg/m ³ (dust and mist)
Northwest Territories	OEL TWA (mg/m ³)	0.2 mg/m ³ (fume) 1 mg/m ³ (dust and mist)
Ontario	OEL TWA (mg/m ³)	0.2 mg/m ³ (fume) 1 mg/m ³ (dust and mist)
Prince Edward Island	OEL TWA (mg/m ³)	0.2 mg/m ³ (fume)
Québec	VEMP (mg/m ³)	0.2 mg/m ³ (fume) 1 mg/m ³ (dust and mist)
Saskatchewan	OEL STEL (mg/m ³)	0.6 mg/m ³ (fume)

		3 mg/m ³ (dust and mist)
Saskatchewan	OEL TWA (mg/m ³)	0.2 mg/m ³ (fume) 1 mg/m ³ (dust and mist)
Yukon	OEL STEL (mg/m ³)	0.2 mg/m ³ (fume) 2 mg/m ³ (dust and mist)
Yukon	OEL TWA (mg/m ³)	0.2 mg/m ³ (fume) 1 mg/m ³ (dust and mist)

Silver (7440-22-4)		
Mexico	OEL TWA (mg/m ³)	0.1 mg/m ³
USA ACGIH	ACGIH TWA (mg/m ³)	0.1 mg/m ³ (dust and fume)
USA OSHA	OSHA PEL (TWA) (mg/m ³)	0.01 mg/m ³
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	0.01 mg/m ³ (dust)
USA IDLH	US IDLH (mg/m ³)	10 mg/m ³ (dust)
Alberta	OEL TWA (mg/m ³)	0.1 mg/m ³
British Columbia	OEL STEL (mg/m ³)	0.03 mg/m ³
British Columbia	OEL TWA (mg/m ³)	0.01 mg/m ³
Manitoba	OEL TWA (mg/m ³)	0.1 mg/m ³ (dust and fume)
New Brunswick	OEL TWA (mg/m ³)	0.1 mg/m ³
Newfoundland & Labrador	OEL TWA (mg/m ³)	0.1 mg/m ³ (dust and fume)
Nova Scotia	OEL TWA (mg/m ³)	0.1 mg/m ³ (dust and fume)
Nunavut	OEL STEL (mg/m ³)	0.3 mg/m ³
Nunavut	OEL TWA (mg/m ³)	0.1 mg/m ³
Northwest Territories	OEL STEL (mg/m ³)	0.3 mg/m ³
Northwest Territories	OEL TWA (mg/m ³)	0.1 mg/m ³
Ontario	OEL TWA (mg/m ³)	0.1 mg/m ³ (dust and fume)
Prince Edward Island	OEL TWA (mg/m ³)	0.1 mg/m ³ (dust and fume)
Québec	VEMP (mg/m ³)	0.1 mg/m ³
Saskatchewan	OEL STEL (mg/m ³)	0.3 mg/m ³
Saskatchewan	OEL TWA (mg/m ³)	0.1 mg/m ³
Yukon	OEL STEL (mg/m ³)	0.03 mg/m ³
Yukon	OEL TWA (mg/m ³)	0.01 mg/m ³

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Solid	Appearance:	
Odor:	Odorless	Odor Threshold:	Not applicable
pH:	Not applicable	Evaporation Rate:	Not applicable
Melting Point:	1083 °C (1981 °F)	Freezing Point:	1065 °C (1950 °F)
Boiling Point:	Not available	Boiling Point Range:	Not available
Flash Point:	Not applicable	Auto-ignition Temperature:	Not applicable
Flammability (solid, gas):	Not flammable	Decomposition Temperature:	Not applicable
Upper Flammable Limit	Not applicable	Lower Flammable Limit:	Not applicable
Vapor Pressure:	Not applicable	Vapor Density at 20 °C:	Not applicable
Relative Density:	8.89 - 8.94 g/cm ³ @ 20 °C	Specific Gravity:	8.89 - 8.94
Solubility:	Negligible in water	Viscosity:	Not applicable
Explosion Data – Sensitivity to Mechanical Impact:	Not expected to present an explosion hazard due to mechanical impact	Explosion Data – Sensitivity to Static Discharge:	Not expected to present an explosion hazard due to static discharge
Partition Coefficient: N-Octanol/Water:	Not applicable		

SECTION 10: STABILITY AND REACTIVITY

Reactivity:	Stable at under normal conditions.
Chemical Stability:	Stable under normal conditions of use and under recommended handling and storage conditions. (Section 7).
Possibility of Hazardous Reactions:	Hazardous polymerization cannot occur.
Conditions to Avoid:	Avoid creating or spreading dust. Incompatible materials.
Incompatible Materials:	Strong acids. Strong bases. Strong oxidizers. Halogens. Mercury. Water (when in molten form)
Hazardous Decomposition Products:	When heated to decomposition, may produce metal oxides and fumes. Contact with strong acids will release hydrogen gas.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure:

Solid copper and copper alloys in massive form (rod, plate, sheet, strip, bar), do not present inhalation, ingestion, eye or skin contact hazards.

When processed by milling, grinding, welding, melting, sawing, brazing, burning or other similar processes the generated dust, fines, fume or mist may pose a hazard through inhalation, ingestion or by eye or skin contact. Most likely exposure routes: For dust: ingestion, inhalation, skin and eye contact. For fume: inhalation and eye contact.

Symptoms/Injuries After Inhalation:	Metal fumes or dust may irritate the mucous membranes and respiratory tract (shortness of breath, wheezing, coughing) Metal fumes or dust can produce an acute allergic condition known as "metal fume fever". Symptoms of metal fume fever may include chills, muscle aches, nausea, fever, dry throat, cough, weakness, and lassitude. The onset of symptoms may be delayed several hours and recovery generally occurs without intervention within 24 to 48 hours.
Symptoms/Injuries After Skin Contact:	Dust or fines may irritate skin. Hot or molten metal will cause thermal burns. Mechanical injury from via flying particles and chipped slag is possible.
Symptoms/Injuries After Eye Contact:	Dust, fines or fumes may cause eye irritation. Hot or molten metal will cause thermal burns. Mechanical damage via flying particles and chipped slag is possible.
Symptoms/Injuries After Ingestion:	Ingestion of dusts or fines from processing can occur due to poor hygiene and may produce irritation of the gastrointestinal tract (nausea, vomiting, and diarrhea)

Chronic Symptoms:

Copper:	Overexposure to fumes may cause metal fume fever. Tissue damage of mucous membranes may follow chronic dust exposure.
Silver:	Chronic skin contact or ingestion of silver dust, salts or fume can result in a condition known as Argyria, a condition with bluish pigmentation of the skin and eyes.
Lead:	Chronic exposure to fumes and/or dust or ingestion of dust can cause kidney damage, anemia, reproductive effects, developmental effects and permanent nervous system damage. Other reported symptoms include polyneuritis, diminished vision and peripheral neuropathy, such as tingling or loss of feeling in fingers, arms & legs, gingival lead line; hypertension.

Information on Toxicological Effects – Product in Massive Form

Acute Toxicity:	Not classified	Germ Cell Mutagenicity:	Not classified
LD50 and LC50 Data:	Not available	Teratogenicity:	Not classified
Skin Corrosion/Irritation:	Not classified	Carcinogenicity:	Not classified
Serious Eye Damage/Irritation:	Not classified	Specific Target Organ Toxicity (Repeated Exposure):	Not classified
Respiratory or Skin Sensitization:	Not classified	Reproductive Toxicity:	Not classified
Aspiration Hazard:	Not classified	Specific Target Organ Toxicity (Single Exposure):	Not classified

Information on Toxicological Effects - Ingredient(s)**LD50 and LC50 Data:**

Silver (7440-22-4)	
LD50 Oral Rat	> 2000 mg/kg

SECTION 12: ECOLOGICAL INFORMATION**12.1. Toxicity** Not classified

Copper (7440-50-8)	
LC50 Fish 1	<= 0.0068 (0.0068 - 0.0156) mg/l (Exposure time: 96 h - Species: Pimephales promelas)
EC50 Daphnia 1	0.03 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
EC50 Other Aquatic Organisms 1	0.0426 (0.0426 - 0.0535) mg/l (Exposure time: 72 h - Species: Pseudokirchneriella subcapitata [static])
LC 50 Fish 2	0.3 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Other Aquatic Organisms 2	0.031 (0.031 - 0.054) mg/l (Exposure time: 96 h - Species: Pseudokirchneriella subcapitata [static])

Silver (7440-22-4)	
LC50 Fish 1	0.00155 (0.00155 - 0.00293) mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Daphnia 1	0.00024 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
LC 50 Fish 2	0.0062 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through])

12.2. Persistence and Degradability Not readily biodegradeable.**12.4. Mobility in Soil** Not available**12.5. Other Adverse Effects** Not available**SECTION 13: DISPOSAL CONSIDERATIONS**

Waste Disposal Methods: Recycle all solid copper and copper alloy scrap. Dust, fines or powders should also be recycled or classified by an environmental professional and disposed of in accordance with all local, regional, national, provincial, territorial and international regulations.

Do not dispose of dust, fines and powders to surface waters or sanitary sewers

Packaging Disposal: Dispose of in accordance with all local, regional, national, provincial, territorial and international regulations.

SECTION 14: TRANSPORT INFORMATION

In Accordance with DOT: Not regulated for transport

In Accordance with IMDG: Not regulated for transport

In Accordance with IATA: Not regulated for transport

In Accordance with TDG: Not regulated for transport

SECTION 15: REGULATORY INFORMATION**15.1. US Federal Regulations**

Copper (7440-50-8)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Listed on United States SARA Section 313	
SARA Section 313 - Emission Reporting	1.0 %

Silver (7440-22-4)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on United States SARA Section 313	
RQ (Reportable Quantity, Section 304 of EPA's List of Lists):	1000 lb < 100 um CERCLA/SARA RQ CHANGE TITLE
SARA Section 313 - Emission Reporting	1.0 %

15.2. US State Regulations

Copper (7440-50-8)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List U.S. - Pennsylvania - RTK (Right to Know) List

Silver (7440-22-4)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List U.S. - Pennsylvania - RTK (Right to Know) List

Lead (7439-92-1)	
U.S. - California - Proposition 65 - Carcinogens List	WARNING: This product contains chemicals known to the State of California to cause cancer.
U.S. - California - Proposition 65 - Developmental Toxicity	WARNING: This product contains chemicals known to the State of California to cause birth defects.
U.S. - California - Proposition 65 - Reproductive Toxicity - Female	WARNING: This product contains chemicals known to the State of California to cause (Female) reproductive harm.
U.S. - California - Proposition 65 - Reproductive Toxicity - Male	WARNING: This product contains chemicals known to the State of California to cause (Male) reproductive harm.

Nickel (7440-02-0)	
U.S. - California - Proposition 65 - Carcinogens List	WARNING: This product contains chemicals known to the State of California to cause cancer.

15.3. Canadian Regulations

Silver Flash Copper Bar	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria

Copper (7440-50-8)	
Listed on the Canadian DSL (Domestic Substances List) Listed on the Canadian IDL (Ingredient Disclosure List)	
IDL Concentration 1 %	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria

Silver (7440-22-4)	
Listed on the Canadian DSL (Domestic Substances List) Listed on the Canadian IDL (Ingredient Disclosure List)	
IDL Concentration 1 %	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION**GHS Full Text Phrases:**

Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

Party Responsible for the Preparation of This Document

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Revision Date: 5/31/2015

This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

Revere Copper Products, Inc. based on our current knowledge, believes the information contained herein to be accurate and reliable. However, the information is provided without any representation or warranty, expressed or implied, regarding the accuracy or correctness. The conditions or methods of handling, storage, use, and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage, or expense arising out of or in any way connected with the handling, storage, use, or disposal of the product. Final determination of occupational safety and health and environmental compliance and suitability of this material is the sole responsibility of the user.