MUELLER BRASS CO.

Mueller Brass Co.
Safety Data Sheet
Copper Bar Alloys (C10100, C10200, C11000)

Section 1 – Product / Supplier Information

Product Name ***Copper Bar Alloys (C10100, C10200, C11000)***

Manufacturer Information

Mueller Brass Co.
2199 Lapeer Avenue
Port Huron, MI 48060

Phone: 810-987-7770

Emergency Telephone: CHEMTREC 800-424-9300

Section 2 – Hazard Identification

General Hazard Statement: Solid copper products are generally classified as "articles" and do not constitute a hazardous materials in solid form under the definitions of the OSHA Hazard Communication Standard (29 CFR 1910.1200). Any articles manufactured from these solid products would be classified as non-hazardous. However some **certain processing** operations may generate dust, mist or fume. **The following information relates to the dust, mist or fumes which may be released during certain processing.**

GHS Classification:

Hazardous to aquatic environment - Acute Hazard - Category 1
Hazardous to aquatic environment - Chronic Hazard - Category 1

GHS LABEL ELEMENTS
Symbol(s)

Signal Word

Warning

Hazard Statements

Very toxic to aquatic life
Very toxic to aquatic life with long lasting effects

Precautionary Statements

Prevention

Do not breathe dust/fume /mist
In case of inadequate ventilation wear respiratory protection
Contaminated work clothing should not be allowed out of the workplace.
Wash hands thoroughly after handling
Wear protective gloves
Use personal protective equipment as required
Do not eat, drink or smoke when using this product.
Avoid release to the environment

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Section 3 – Composition/Information on Ingredients

CAS #	Component	Percent
7440-50-8	Copper	99.9+

Section 4 – First Aid Measures

This information relates to the dust, mist or fumes which may be released during certain processing (See Section 2)

Eyes

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. Consult a physician.

Skin

Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician.

Ingestion

If conscious, give large amounts of water and induce vomiting. Get medical attention.

Inhalation

Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get immediate medical attention.

Section 5 – Firefighting Measures

This information relates to the dust, mist or fumes which may be released during certain processing (See Section 2)

General Fire Hazards

See Section 9 for Flammability Properties. This product does not present fire or explosion hazards as shipped. Small chips, fines, and dust from processing may be readily ignitable.

Hazardous Combustion Products

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact.

Extinguishing Media

Class D extinguishing agents on fines, dust or molten metal. Use coarse water spray on chips and fines.

Unsuitable Extinguishing Media

DO NOT use halogenated extinguishing agents on small chips or fines. DO NOT use water for fires involving molten metal. These fire extinguishing agents will react with burning material.

Fire Fighting Equipment/Instructions

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

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Section 6 – Accidental Release Measures

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Recovery and Neutralization
Avoid dust formation.

Materials and Methods for Clean-Up
Use clean-up methods that avoid dust generation (vacuum wet). Wear a NIOSH approved respirator if dust will be generated in clean-up

Personal Precautions and Protective Equipment
Wear appropriate protective clothing and respiratory protection for the situation.

Environmental Precautions
Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system.

Prevention of Secondary Hazards
None

Section 7 – Handling and Storage

This information relates to the dust, mist or fumes which may be released during certain processing (See Section 2)

Handling Procedures
For dust, fume and mist, avoid contact with skin, eyes and clothing. Wear personal protective equipment. Avoid dust formation. Avoid contact with sharp edges or heated material.

Storage Procedures
Keep container tightly closed in a dry and well-ventilated place.

Incompatibilities
See Section 10

Section 8 – Exposure Controls/Personal Protection

This information relates to the dust, mist or fumes which may be released during certain processing (See Section 2)

Component Exposure Limits
Copper (7440-50-8)

ACGIH: 0.2 mg/m^3 TWA (fume)
OSHA: 1.0 mg/m^3 TWA (dust, mist, as Cu) 0.1 mg/m^3 TWA (fume)
NIOSH: 1 mg/m^3 TWA (dust and mist); 0.1 mg/m^3 TWA (fume)

Engineering Measures
Where feasible, enclose processes to prevent dust dispersion into the work area. Provide local exhaust when possible, and general ventilation as necessary, to keep airborne concentrations below exposure limits and as low as possible.

Personal Protective Equipment

Respiratory

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hands

Use impervious gloves such as neoprene, nitrile, or rubber for hand protection.

Eyes

Wear safety glasses with side shields and/or goggles as necessary to prevent dust from entering eyes.

Skin and Body

Use body protection appropriate for task.

Hygiene Measures

Do not breathe dust/fumes/mists. When using, do not eat, drink or smoke. Provide regular cleaning of equipment, work area and clothing. For dust, fumes and mist, avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. Keep away from food, drink and animal feeding stuffs.

Section 9 – Physical and Chemical Properties

Appearance:	Reddish yellow	**Odor:**	None
Physical State:	Solid	**pH:**	NA
Vapor Pressure:	ND	**Vapor Density:**	ND
Boiling Point:	ND	**Melting Point:**	1083 °C
Solubility (H2O):	Insoluble	**Specific Gravity:**	8.94 g/cm^3
Evaporation Rate:	ND	**VOC:**	ND
Octanol/H_2O Coeff.:	ND	**Flash Point:**	NA
Flash Point Method:	NA	**Upper Flammability Limit (UFL):**	NA
Lower Flammability Limit (LFL):	NA	**Burning Rate:**	NA
Auto Ignition:	NA		

Section 10 – Stability and Reactivity

This information relates to the dust, mist or fumes which may be released during certain processing (See Section 2)

Chemical Stability

Stable under recommended storage conditions.

Hazardous Reaction Potential

Will not occur.

Conditions to Avoid

Dust, fume and mist formation. Heat, flames and sparks.

Incompatible Products

Acetylene, strong acids, strong oxidizing agents, chlorine, fused ammonium nitrate, nitrosyl fluoride, iodine pentafluoride

Hazardous Decomposition Products

Copper oxide

Section 11 – Toxicological Information

This information relates to the dust, mist or fumes which may be released during certain processing (See Section 2)

Acute Toxicity

Component Analysis - LD50/LC50

NA

Skin

Contact with dust can cause mechanical irritation of the skin. Prolonged skin contact may defat the skin and produce dermatitis. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. Copper exposure may results in complications for those individuals with Wilson's disease.

Eye

Dust contact with the eyes can lead to mechanical irritation.

Ingestion

May irritate stomach if swallowed.

Inhalation

Inhalation of dust in high concentration may cause irritation of respiratory system.

Respiratory Organs Sensitization/Skin Sensitization

May cause an allergic skin reaction

Generative Cell Mutagenicity

NA

Carcinogenicity

A: General Product Information

NA

B: Component Carcinogenicity

NA

Reproductive Toxicity

NA

Specified Target Organ General Toxicity: Single Exposure

NA

Specified Target Organ General Toxicity: Repeated Exposure

NA

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Aspiration Respiratory Organs Hazard

NA

Section 12 – Ecological Information

This information relates to the dust, mist or fumes which may be released during certain processing (See Section 2)

Ecotoxicity

A: General Product Information

Copper powder is very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

Copper (7440-50-8)

Test & Species	Conditions
96 Hr LC50 Pimephales promelas	0.0068 - 0.0156 mg/L
96 Hr LC50 Pimephales promelas	<0.3 mg/L [static]
96 Hr LC50 Pimephales promelas	0.2 mg/L [flow-
96 Hr LC50 Oncorhynchus mykiss	0.052 mg/L [flow- through]
96 Hr LC50 Lepomis macrochirus	1.25 mg/L [static]
96 Hr LC50 Cyprinus carpio	0.3 mg/L [semi- static]
96 Hr LC50 Cyprinus carpio	0.8 mg/L [static]
96 Hr LC50 Poecilia reticulata	0.112 mg/L [flow- through]
72 Hr EC50 Pseudokirchneriella subcapitata	0.0426 - 0.0535 mg/L [static]
96 Hr EC50 Pseudokirchneriella subcapitata	0.031 - 0.054 mg/L [static]
48 Hr EC50 Daphnia magna	0.03 mg/L [Static]

Persistence/Degradability

Metal powders may cause ecological damage through silting or sedimentation effect in water depriving organisms of habitat and mobility, and/or fouling of gills, lungs and skin thus limiting oxygen uptake.

Bioaccumulation

Metal powders in water or soil may form metal oxides or other metal compounds that could become bioavailable and harm aquatic or terrestrial organisms.

Mobility in Soil

Metal powder would be relatively immobile in soils but some metal compounds may be transported with ground water.

Section 13 – Disposal Considerations

This information relates to the dust, mist or fumes which may be released during certain processing (See Section 2)

Waste Disposal Instructions

See Section 7 for Handling Procedures.

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See Section 8 for Personal Protective Equipment recommendations.

Disposal of Contaminated Containers or Packaging

Dispose of in accordance with federal, state and local regulations

Section 14 – Transport Information

This information relates to the dust, mist or fumes which may be released during certain processing (See Section 2)

Component Marine Pollutants

This material contains one or more of the following chemicals required by US DOT to be identified as marine pollutants.

Component	CAS #	
Copper	7440-50-8	DOT regulated severe marine pollutant (powder)

DOT Information

Shipping Name: Not Regulated

IATA Information

Shipping Name: Not Regulated

ICAO Information

Shipping Name: Not Regulated

IMDG Information

Shipping Name: Not Regulated

Section 15 – Regulatory Information

Regulatory Information

A: Component Analysis

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

Copper (7440-50-8)

SARA 313: 1.0 % de minimis concentration
CERCLA: 5000 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm);

B: Component Marine Pollutants

This material contains one or more of the following chemicals required by US DOT to be identified as marine pollutants.

Copper (7440-50-8)

55-96 DOT regulated severe marine pollutant (powder)

State Regulations

A: Component Analysis - State

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The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA	RI
Copper	7440-50-8	Yes	Yes	Yes	Yes	Yes	Yes

Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS #	Minimum Concentration
Copper	7440-50-8	1 %

Additional Regulatory Information

Component Analysis - Inventory

Component	CAS #	TSCA	CAN	EEC
Copper	7440-50-8	Yes	DSL	EINECS

Section 16 - Other Information

Key/Legend

ACGIH = American Conference of Governmental Industrial Hygienists; DOT = Department of Transportation; DSL = Domestic Substances List; EEC = European Economic Community; EINECS = European Inventory of Existing Commercial Chemical Substances; EU = European Union; IARC = International Agency for Research on Cancer; IMO = International Maritime Organization; IATA = International Air Transport Association; NDSL = Non-Domestic Substances List; NTP = National Toxicology Program; TLV = Threshold Limit Value; TWA = Time Weighted Average; NIOSH = National Institute of Occupational Safety and Health; OSHA = Occupational Safety and Health Administration; IMDG = International Maritime Dangerous Goods Code; IATA = International Air Transport Association

Literature References

None

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