

COPPER METAL – SAFETY DATA SHEET

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1. PRODUCT IDENTIFICATION

Importer / Supplier / Distributor:

UnifiedAlloys

8835 – 50th Avenue
Edmonton, Alberta CANADA
T6E 5H4




Emergency Phone #: (780) 468-5656 (on-call service)

The conditions or methods of handling, storage, use, and disposal of the product are beyond our control and may be beyond 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.

NOTE: This product contains no other hazardous ingredients requiring disclosure under current regulations.

2. HAZARD IDENTIFICATION

Classification: Copper and copper alloys are considered as non-hazardous in its soiled form. However, certain process such as cutting, milling, grinding and welding could result in some hazardous material being emitted.

SYMBOLS	HAZARD	HAZARD STATEMENTS
	Carcinogenicity Respiratory sensitizer Toxics to reproduction	May cause cancer May cause allergy or asthma symptoms or breathing difficulties if inhaled May cause genetic effects.
	Skin Sensitizer repeated exposure	May cause skin allergies prolonged exposure may damage internal organs
	Acute toxic to aquatic life	Toxic to aquatic life with long lasting effects.

3. COMPOSITION INFORMATION ON INGREDIENTS

Component (*)	CAS Number	% Weight	OSHA PEL (mg/m ³)	ACGIH TLV (mg/m ³)
Copper (Cu)	7440-50-8	99.8	0.1 fume / 1.0 dust	0.2 fume / 1.0 dust

NOTE: This product contains no other hazardous ingredients requiring disclosure under current regulations.

4. FIRST-AID MEASURES

Inhalation: Dust may irritate nose and throat. If heated, copper fumes may cause metal fume fever, a benign transient flu-like condition.

Ingestion: Rare in industry. Dust may irritate mouth and gastrointestinal tract. If a substantial amount has been ingested, remove from exposure, treat as a foreign body and induce vomiting.

Eyes: Dust acts as a foreign body. Flush eyes thoroughly with clean, lukewarm water for 15 minutes. See medical attention if condition persists.

Note: Do not induce vomiting or give liquids to an unconscious person.
Respiratory disorders may be aggravated by exposure to metallic and/or organic/inorganic coating dust or fumes. Consult a Physician

5. FIRE AND EXPLOSION HAZARD

- Conditions of flammability:** Steel products (Copper Metal) does not present fire or explosion hazards under normal conditions. Fine metal particles such as those produced in grinding or sawing can burn. High concentrations of metal filings may present an explosion hazard.
- Means of extinction:** For molten metal use dry powder or sand. Do NOT use water on molten metals.
- Flashpoint and method of determination:** N/A (under normal conditions)

4. **Upper and Lower Flammable Limit:** N/A (under normal conditions)
5. **Auto-ignition temperature:** N/A (under normal conditions)
6. **Hazardous Combustion Products:** N/A (under normal conditions)
8. **Explosion Data:** sensitivity to mechanical impact: N/A (under normal conditions)
9. **Explosion Data:** sensitivity to static discharge: N/A (under normal conditions)

6. ACCIDENTAL RELEASE MEASURES

Leak and Spill Procedures: Not applicable to soiled state, no effect on Environment and Human lives. Solid metal does not pose any problems. Dust spills should be cleaned up avoiding dust generation. Collect and recycle to process. Wash down with water if in contact with acids.

7. HANDLING AND STORAGE

Storage Requirements: Store away from corrosive chemicals.

Special Shipping Information: N/A

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Personal Protective Equipment: Dependent upon processes being performed on material. Each operator must be addressed for suitable equipment.

Gloves: Protective gloves should be worn during welding, burning or handling operations.

Clothing: As required. Dependent on the operations and local welding codes.

Respiratory: NIOSH / MSHA approved dust and fume respirator should be used to avoid excessive inhalation of particles when exposure exceeds TLV's.

Footwear: CSA Z195-02 Steel Toed, safety shoes.

Eye: safety glasses, goggles or face shield should be worn as required by exposure.

Other: With molten metals, use full body cover clothing, including gloves, eyewear and footwear suitably treated to prevent burns

Engineering Controls: Engineering controls required if incase welding, milling, cutting and grinding work is performed. (e.g. ventilation, enclosures, specify) Depending on type of process performed a specific equipment and PPE's are required to perform the job safely.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical State	Solid
Odor	NA
Evaporation Rate	NA
Boiling Point	2324 Degree Celsius
Melting Point	1083 Degree Celsius
PH	NA
Solubility in Water	NA
Vapor Pressure	1 mm at 1628 degree Celsius
Density	8.94
Appearance	Red Ductile
Volatility	NA
Odor threshold	NA
Specific gravity	(H2O=1): 8.94
Freezing Point	NA
Coefficient of water / oil distribution	Negligible

10. STABILITY AND REACTIVITY

Reactivity: Not determined when it's in solid form.

Chemical stability: Yes, Copper and its alloys are stable under normal storage and handling condition.

Conditions of Reactivity: Hydrogen Peroxide

Hazardous Decomposition Products: Does not decompose. Reaction with acids could produce noxious gasses. In contact with acids, hydrogen may evolve.

Incompatibility to Other Substances: Copper reacts violently with acetylene, ammonium nitrate, bromates, chlorates, iodates. Copper foil burns spontaneously in gaseous chlorine. Avoid contact with chlorine and oxygen difluoride, ethylene oxide, fluoride, hydrogen peroxide, hydrazine mono-nitrate and hydrazoic acid. Incompatible with hydrogen sulfide, lead azide, potassium peroxide.

Possibility of hazardous Reactions: Hazardous polymerization cannot occur.

11. TOXICOLOGICAL PROPERTIES

Effects of Acute Exposure to Material:

Short term exposure to fumes / dust may produce irritation of eyes and respiratory system. Inhalation of high concentrations of freshly formed oxide fumes of iron, manganese, and copper may cause metal fume fever characterized by a metallic taste in the mouth, dryness and irritation of the throat and influenza – like symptoms. Dermal contact of filings could cause infection / blood poisoning.

Effects of Chronic Exposure to Material:

Chronic inhalation of high concentrations of iron – oxide fumes or dust may lead to a benign pneumoconiosis (siderosis). Inhalation of high concentrations of ferric oxide may possibly enhance the risk of lung cancer development in the workers exposed to pulmonary carcinogens.

Carcinogenicity of Material:

Chromium and nickel and their compounds are listed in the 3rd Annual Report on Carcinogens as prepared by the National Toxicology Program (NTP). Exposure to high concentrations of dust and fumes can cause sensitization dermatitis, inflammation, and / or ulceration of the upper respiratory tract and possibly cancer of nasal passages and lungs. Recent epidemiological studies of workers melting and working alloys containing nickel / chromium have found no increased risk of cancer.

Irritancy of Material: N/A

Sensitization to Material: N/A

Mutagenicity of Material: N/A

Reproductive Effects: N/A

Teratogenicity of Material: N/A

Carcinogenicity of Material: N/A

12. ECOLOGICAL INFORMATION

Eco-toxicity: No data available for copper and its alloys in their natural solid state.

Presence of Degradability: NO data available

Bioaccumulation Potential: NO data available

Mobility in soil: NO data available

Other adverse effects: None known.

13. DISPOSAL CONSIDERATION

Waste Disposal: Recover copper for recycling. Follow applicable regulations. Dispose of in compliance with local regulations.

14. TRANSPORT INFORMATION

General Shipping Information: Material not regulated for shipping.

Un Number: NA

Hazard Class: NA

Special Shipping Information: N/A

15. REGULATORY INFORMATION

Domestic Substances List: the components of this material are on the federal DSL inventory.

Other Canadian Regulations: NA

WHMIS: Class D2A / D2B: materials causing other Toxic effects when other processes are performed (Welding, cutting and grinding)

16. OTHER INFORMATION

Prepared By: UnifiedAlloy

Telephone: (780) 468-5656

Note: Contact Supplier (Quality Department) for additional information

Preparation Date: December / 20 / 2018

IMPORTANT! Read this SDS before use or disposal of this product. Pass along the information to employees and any other persons who could be exposed to the product to be sure that they are aware of the information before use or other exposure. This SDS has been prepared in accordance with the Globally Harmonized System of Chemical and Labeling of Chemicals (GHS) Fifth Edition and the OSHA Hazard Communication Standard [29 CFR 1910.1200]. The SDS information is based on sources believed to be reliable. Available data, safety standards, and government regulations are subject to change and the conditions of handling and use, or misuse are beyond our control, Unified Alloys makes no warranty, either expressed or implied, with respect to the completeness or continuing accuracy of the information contained herein and disclaims all liability for reliance thereon. Additional information may be necessary or helpful for specific conditions and circumstances of use. It is the user's responsibility to determine the suitability of this product and to evaluate risks and exercise appropriate precautions for protection of employees and others prior to use.