SAFETY DATA SHEET

SECTION 1. IDENTIFICATION
Copper Tubing (all sizes and wall thicknesses)

Cerro Flow Products LLC
PO Box 66800, St Louis, MO 63166-6800 Telephone number 618-337-6000

Recommended use: Plumbing and industrial copper tubing. Restricted use: None known

SECTION 2. HAZARD IDENTIFICATION

CAUTION
Inhalation Hazard Fumes are created by heating copper past its melting point. Proper soldering or sweating copper tubes will not produce fumes. Brazing of copper tube may produce fumes. Consult the Copper Development Association Inc. (CDA) “The Copper Tube Handbook” for proper joining methods, and recommended solders, fluxes and filler metals (see CDA link on www.cerroflow.com to obtain handbook).

Ingestion Hazard Ingestion of metallic copper is not a primary route of exposure. Metallic copper may be moderately irritating to the gastrointestinal tract.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>MATERIAL OR COMPONENT</th>
<th>C.A.S. No.</th>
<th>WT. %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper</td>
<td>7440-50-8</td>
<td>99.9+</td>
</tr>
</tbody>
</table>

SECTION 4. FIRST AID MEASURES
Inhalation: Remove from exposure; place individual under care of a physician.
Ingestion: Induce vomiting in conscious individual and call a physician.
Skin or Eyes; Flush with plenty of water. If symptoms develop, consult a physician.

SECTION 5. FIRE FIGHTING MEASURES

FIRE AND EXPLOSION HAZARDS FIRE EXTINGUISHING AGENTS RECOMMENDED FIRE EXTINGUISHING AGENTS TO AVOID
Not Applicable No specific agents recommended No specific agents recommended

SPECIAL FIRE FIGHTING PRECAUTIONS
Copper tube will not burn or give off toxic gases in normal fires Use fire fighting methods compatible with surrounding materials.

SECTION 6. RELEASE MEASURES

SPILLS OR LEAKS
Proper installation of copper tubing will not produce dust. Consult Copper Development Association, Inc (CDA)”The Copper Tube Handbook” for proper joining methods (See CDA link on http://www.cerroflow.com to obtain handbook) Vacuuming is preferred for dust. Do not use compressed air for cleaning. Recycle unused or scrap copper tube at a local scrap metal dealer.
SECTION 7. HANDLING AND STORAGE

NORMAL HANDLING
Avoid conditions which create fumes or fine dust. Use of approved respirators is required where adequate ventilation cannot be provided. Do not use copper tubing where incompatible materials may be present, (see section X).

STORAGE
Avoid storage near incompatible materials, see Section 10.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<table>
<thead>
<tr>
<th>Permissible Air Conc. (mg/m³)</th>
<th>OSHA</th>
<th>ACGIH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dust</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>Fume</td>
<td>0.1</td>
<td>0.2</td>
</tr>
</tbody>
</table>

ENGINEERING CONTROLS
Local exhaust is recommended for dust and/or fume generating operations where airborne exposure may exceed permissible air concentrations.

PERSONAL HYGIENE
Avoid inhalation or ingestion. Practice good housekeeping and personal hygiene procedures. Showering is recommended if significant dust exposure occurs.

SPECIAL: PRECAUTIONS/PROCEDURES/LABEL INSTRUCTIONS
No special precautions.

LABEL SIGNAL WORD: NOT APPLICABLE

RESPIRATORY PROTECTION
Where airborne exposures may exceed OSHA/ACGIH permissible air concentrations, the minimum respiratory protection recommended is a negative pressure air purifying respirator with cartridges that are NIOSH/MSHA approved against dust, fumes, and mists having a TWA not less than 0.05 mg/m³

EYES AND FACE
Safety glasses recommended when dust or shavings may exist.

OTHER CLOTHING AND EQUIPMENT
Protective clothing is recommended to prevent burns during installation of tube or splattering of fluxes, solder or filler metals.

SECTION 9. PHYSICAL/CHEMICAL PROPERTIES

MATERIAL IS (AT NORMAL CONDITIONS) APPEARANCE AND ODOR
Solid Yellow-red metal, various shapes and sizes.

MELTING POINT (DEGREES C) BOILING POINT (DEGREES C) SPECIFIC GRAVITY (H₂O = 1) VAPOUR DENSITY (AIR = 1)
1083 2595 8.96 Not applicable

SOLUBILITY IN WATER (% BY WT.) pH VAPOUR PRESSURE (mm Hg) EVAPORATION RATE
Insoluble Not Applicable Not Applicable Not Applicable

SECTION 10. STABILITY AND REACTIVITY

STABILITY CONDITIONS TO AVOID
Stable Not Applicable

INCOMPATIBILITY (MATERIALS TO AVOID)
Reacts violently with acetylene, hydrogen peroxides, gaseous chlorine, ammonia nitrate, bromates, chlorates, hydrogen sulfide, lead azide, and hydrazine.

HAZARDOUS DECOMPOSITION PRODUCTS HAZARDOUS POLYMERIZATION CONDITIONS TO AVOID
Copper does not decompose Will not occur Not Applicable

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SECTION 11. TOXICOLOGICAL INFORMATION

PRIMARY ROUTES OF ENTRY   INHALATION   CARCINOGENICITY

X   Not listed as a carcinogen by NTP, IARC, or OSHA

ACUTE OVEREXPOSURE (SYMPTOMS AND EFFECTS)
A. Fumes are created by heating metallic copper past its melting point. Proper soldering or sweating copper tubes will not produce fumes. Brazing of copper tube may produce fumes. Consult Copper Development Association, Inc. (CDA) “The Copper Tube Handbook” for proper joining methods, and recommended solders, fluxes and filler metals (see CDA link on Cerro Flow Products, LLC website to obtain handbook). Use approved ventilation or respiratory protection if the possibility of fumes exists. Inhalation of fume may cause irritation of the respiratory tract or metal fume fever (chills, fever, aching muscles, dry mouth and throat, headache, nausea, vomiting, and diarrhea). Onset may be delayed several hours.
B. Ingestion of metallic copper is not a primary route of exposure. Metallic copper may be moderately irritating to the gastrointestinal tract.

CHRONIC OVEREXPOSURE (SYMPTOMS AND EFFECTS)
No long term effects. Skin irritation or discoloration of the skin and hair are short term.

MEDICAL CONDITIONS POSSIBLY AGGRAVATED
Wilson’s Disease (an abnormal genetic condition) could be aggravated.

LD50 (SPECIES, ROUTE)   LC50 (SPECIES)   MUTAGENICITY
Copper: 3.5 mg/kg (mouse, intraperitoneal)   Not Available   Not positive in Ames test

<table>
<thead>
<tr>
<th>Health Hazard Ratings</th>
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<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Health</td>
</tr>
<tr>
<td>NFPA</td>
</tr>
<tr>
<td>HMIS</td>
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</table>

SECTION 12. ECOLOGICAL

ECOTOXICITY ENVIRONMENTAL FATE
The LC50 for copper in the fathead minnow is 12 mg/L. Acid solutions promote mobility and solubility of copper.

SECTION 13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHODS (DISPOSER MUST COMPLY WITH FEDERAL, STATE, AND LOCAL DISPOSAL OR DISCHARGE LAWS).
Recycling or disposal must be in accordance with the appropriate federal, state, or local statutes or regulations.

SECTION 14. TRANSPORT

DOT REGULATION AND ID (OR PIN) NUMBER
Not a DOT controlled material (United States).
Special Provisions for Transport: Marine Pollutant

SECTION 15. REGULATORY INFORMATION

WHMIS CLASSIFICATION, SARA REGULATION AND OTHER INFORMATION
WHMIS does not classify this material
TSCA Status ------------------------ On TSCA Inventory
Regulated under SARA Title III:
  Sect. 302 ------------------------ None
  Sect. 311/312 --------------------- Immediate and Delayed
  Sect. 313 Chemicals --------------- Copper
CERCLA Reportable Quantity ------ 5,000 pounds for Copper Powder

Federal and State Regulations:
Pennsylvania RTK: Copper Massachusetts RTK: Copper TSCA 8(b) inventory: Copper CERCLA: Hazardous substances. Copper
WHMIS (Canada): CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

SECTION 16. OTHER INFORMATION

ISSUED DATE SUPERSEDES
October 1, 2016 August 15, 2013

PERMISSIBLE CONCENTRATION REFERENCE
OSHA regulations for airborne contaminants 29 CFR 1910.1000 and 1018; ACGIH Threshold Limit Values for Chemical Substances

HAZARD INFORMATION REFERENCES
Documentation Up to date, curated data provided by Mathematica's ElementData function from Wolfram Research, Inc

GENERAL

Notes
No additional information.

THE INFORMATION AND RECOMMENDATIONS SET FORTH HEREIN ARE TAKEN FROM SOURCES BELIEVED TO BE ACCURATE AS OF THE DATE HEREOF; HOWEVER, CERRO FLOW PRODUCTS LLC MAKES NO WARRANTY WITH RESPECT TO THE ACCURACY OF THE INFORMATION OR THE SUITABILITY OF THE RECOMMENDATIONS, AND ASSUMES NO LIABILITY TO ANY USER THEREOF.