



**CHEMICAL NAME AND SYNONYMS:**

**COPPER**

**TRADE NAME AND SYNONYMS:**

**(OFHC) (DHP) (ETP) ELECTROLYTIC TOUGH PITCH**  
CDA ALLOY 101, 102, 104, 105, 107, 110\*, 113, 114, 115, 116, 120, 122  
\*INCLUSIVE ALLOY 110 SILVER PLATE  
Copper plus silver - All grades of copper covered (including silver bearing - 104, 105, 107, 113, 114, 115, 116) are expected to contain less than .1% silver.

**CHEMICAL FAMILY:**

**COPPER**

**SECTION II - HAZARDOUS INGREDIENTS**

INGREDIENT	PERCENT	CAS NO.	OSHA-PEL/ACGIH-TLV
BASE METAL *COPPER	99.9	7440-50-8	FOR EXPOSURE LEVELS SEE SECTION V

**HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS OR GASES:** If exposure to copper dust/fume are kept below Permissible Exposure Limits (PEL)/Threshold Limit Value (TLV) all trace elements should not pose any health risk. \*Chemical(s) listed as a toxic chemical subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

**SECTION III - PHYSICAL DATA**

Melting Point	1949° F
Vapor Pressure (mm Hg.)	N/A
Solubility in Water	Negligible
Specify Gravity (H <sub>2</sub> O=1)	8.9

**SECTION IV - FIRE AND EXPLOSION HAZARD DATA**

Flash Point	Not Applicable *
Extinguishing Media	Not Applicable
Special Fire Fighting Procedures	Not Applicable
Unusual Fire and Explosion Hazards	Not Applicable

\*Under normal conditions. Heavy concentrations of fine copper dust may cause flash fire if exposed to ignition source.

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**SECTION V - HEALTH HAZARD DATA**

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**EXPOSURE LEVELS:** Copper dust and mists - OSHA (PEL): TWA = 1 MG/M<sup>3</sup>. ACGIH (TLV): TWA = 1 MG/M<sup>3</sup>.  
Copper fumes - OSHA (PEL): TWA = 0.1 MG/M<sup>3</sup>. ACGIH (TLV): TWA = 0.2 MG/M<sup>3</sup>

**CARCINOGENICITY:** Not listed as a carcinogenic in NTP, IARC Monographs, or OSHA.

**EFFECTS OF OVEREXPOSURE (ACUTE):** Fumes and dust - sneezing, cough, congestion, nausea, metallic tastes, irritation of upper respiratory tract, chills, fever.

**EMERGENCY FIRST AID PROCEDURES:**

- Skin: Flush thoroughly with water.
- Eyes: Flush with water, call Physician.
- Ingestion: Drink water, induce vomiting, call Physician.
- Inhalation: Remove victim to fresh air, call Physician.

Copper fume, dusts and mists are listed by OSHA as air contaminants (29 CFR 1910.1000 Sub-part Z)

**PRIMARY ROUTE(S) OF ENTRY:** Inhalation.

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**SECTION VI - REACTIVITY DATA**

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**STABILITY:** Stable

**INCOMPATIBILITY (material to avoid):** Dust and fumes: acetylene, chlorine - Metals: acids and oxidizers.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Copper fumes/dust.

**HAZARDOUS POLYMERIZATION:** Will not occur.

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**SECTION VII - SPILL OR LEAK PROCEDURES**

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**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:** Dust or Fume - wear respirator, follow OSHA use instructions, shovel up, or vacuum and place in approved DOT container and seal. Wash contaminated clothing.

**WASTE DISPOSAL METHOD:** Dispose of contaminated product and materials used in cleaning up spills or leaks in a manner approved for this material. Follow federal, state and local regulations for disposal.

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**SECTION VIII - SPECIAL PROTECTION INFORMATION**

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**RESPIRATORY PROTECTION (DUST/FUME):** Dust or fume - NIOSH/MSHA approved, dust/fume respirator.

**VENTILATION (DUST/FUME):** Local Exhaust - if exposure levels exceeded.

**EYE PROTECTION (DUST):** Goggles.

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**SECTION IX - SPECIAL PRECAUTIONS**

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**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:** Avoid breathing dust or fumes. Do not take internally. Practice good housekeeping and personal hygiene procedures.