

# Material Safety Data Sheet

Date of Preparation: 2009/01/09

Product Name: Polyurethane Enameled Round Copper Magnet Wire

## A. GENERAL INFORMATION

Trade Name Polyurethane Enameled Round Copper Magnet Wire			
Component	CAS Number	WT %	Molecular Weight
Copper (Cu)	7440-50-8	97~98%	63.55
Polyurethane Resin (C <sub>10</sub> H <sub>10</sub> O <sub>4</sub> N <sub>2</sub> ) <sub>n</sub>	Confidential	2~3%	--
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## B. PHYSICAL DATA

Material is (at Normal Conditions): Solid	Appearance and Odor Yellow-red metal, odorless, in the form of round wire	
Boiling Point Cu 2595 °C	Specific Gravity (H <sub>2</sub> O = 1) 8.64~8.74	Vapor Density (Air = 1) Not Applicable
Melting Point Cu 1083 °C		
Solubility in Water (% by weight) Insoluble	Ph Not Applicable	Vapor Pressure (mmHg at 20 °C) Not Applicable
Evaporation Rate Not Applicable	% Volatiles by Volume (at 20 °C) Not Applicable	

## C. REACTIVITY DATA

Stability Stable	Conditions to Avoid High Temperature
Incompatibility (Materials to Avoid) Concentrated acids and bases. Bare conductor (Copper) should avoid contact with acetylene, chlorine, oxidizers, magnesium and halogenate.	
Hazardous Decomposition Products Extreme temperatures can generate metal fume.	
Hazardous Polymerization Will Not Occur	

## D. HAZARDOUS INGREDIENTS

Component	CAS Number	WT %	Molecular Weight
None	N/A	N/A	N/A

### E. FIRST AID MEASURES

Eyes:	Flush eyes immediately with water for at least 15 minutes. Get medical attention.
Skin:	Promptly wash with plenty of soap and water.
Inhalation:	Remove to fresh air. Get medical assistance for irritation or any other symptoms.
Ingestion:	If conscious, give plenty of water or milk. Induce vomiting by touch finger to back of throat. Get immediate medical attention.

### F1. HAZARDS INFORMATION: HEALTH

Eyes	Mechanical irritation, potentially severe, can result from eye contact with this material.
Skin	Although not commonly associated with industrial dermatitis, mechanical irritation is possible along with skin discoloration.
Inhalation	Dust or fume inhalation can cause "metal Fume Fever", Headaches, cramps, pain in extremities in addition to respiratory irritation.
Ingestion	Ingestion of copper will irritate the gastrointestinal tract producing salivation, nausea, vomiting and gastric pain.
Permissible Concentration: Air	Copper: TWA = 1 mg/m <sup>3</sup> (dust); TWA = 0.2 mg/m <sup>3</sup> (fume); PEL = 1mg/m <sup>3</sup> (dust).
Unusual Chronic Toxicity	Wilson's disease may be affected by copper exposure.

### F2. HAZARDS INFORMATION: FIRE AND EXPLOSION

Flash Point	Auto Ignition Temperature	Flammable Limits in Air (% by Vol.)
None	Not Applicable	Resins are flammable
Unusual Fire and Explosion Hazards		
None known		

### G. PRECAUTIONS/PROCEDURES

Fire Extinguishing Agents RECOMMENDED	Use any agent suitable for surrounding fire.
Fire Extinguishing Agents to AVOID	None known
Special Fire Fighting Precautions	Avoid breathing dusts and fumes from burning material. Use NIOSH approved breathing apparatus and full protective clothing.
Ventilation	Local exhaust: In packaging and unloading areas, over open processing equipment, and any other places where dusty or misty condition prevails. Natural ventilation: Adequate for other areas.
Normal Handling	Avoid contact with eyes, skin, or clothing. Avoid breathing dust or fume. Use good personal hygiene and housekeeping.
Storage	Avoid storage near acetylene, chlorine, oxidizers, magnesium, and halogenates.
Spill or Leak (Always Wear Personal Protective Equipment – Section H)	Promptly sweep up with minimum dusting. Collect for reuse.
Special: Precautions/Procedures/Label Instructions	None

#### **H. PERSONAL PROTECTIVE EQUIPMENT**

Respiratory Protection
None needed under most conditions. If dust or fume is expected, use a NIOSH approved HEPA or fume respirator.
Eyes and Face
Safety glasses or goggles.
Hands, Arms and Body
None normally needed. Impervious gloves may be used to prevent mechanical irritation.
Other Clothing and Equipment
Eye-wash is recommended.

#### **I. ENVIRONMENTAL**

Clean up of Spilled Material
Clean up using method which minimizes copper dust generation
Water Disposal Methods
Recycle scrap material in accordance with all local, state & federal regulations

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