

# MATERIAL SAFETY DATA SHEET

## MSDS NO. 110

### SECTION I - IDENTIFICATION

**Helwig Carbon Products, Inc.**

Telephone: (414) 354-2411

Fax: (414) 354-2421



8900 West Tower Ave  
Milwaukee WI 53224

**Product Name:**

Carbon/Graphite with Copper

**Chemical Name:**

Mixture

<b>Hazard Rating</b> Least 0 Moderate 2 Extreme 3	Slight 1 High 3	 <b>Health</b> 2
		 <b>Fire</b> 0
		 <b>Reactivity</b> 0

### SECTION II - HAZARDOUS INGREDIENTS

INGREDIENT	PERCENT	C.A.S. NO.
Copper*	5-60	7440-50-8

\*Copper is the critical component of this mixture for hazard assessment.

### SECTION III - OCCUPATIONAL EXPOSURE LIMITS

	<u>Copper (metal)</u>	<u>Natural Graphite</u>
<b>OSHA PEL:</b>	1.0 mg/m <sup>3</sup> Dust & Mist 0.1 mg/m <sup>3</sup> Fume	2.5 mg/m <sup>3</sup> Respirable Dust
<b>ACGIH TLV:</b>	1.0 mg/m <sup>3</sup> Dust & mist 0.2 mg/m <sup>3</sup> Fume	2.5 mg/m <sup>3</sup> Respirable Dust
<b>NIOSH:</b>	N/A	
<b>CARCINOGEN:</b>	NTP <u>No</u>	IARC <u>No</u>
		OSHA <u>No</u>

### SECTION IV - HEALTH HAZARDS

**Effects of exposure:**

Primary Route(s) of Entry: Inhalation of dust

Effects of Overexposure:

Eyes: At high dust level, mechanical irritation.

Skin: Possible temporary skin and hair discoloration from copper.

Breathing & Swallowing: Copper fume may cause metal fume fever and a metallic taste.

Medical conditions recognized as possibly aggravated by exposure:

Individuals with pre-existing chronic respiratory impairments or with serum antitrypsin deficiency may be at increased risk of disabling pneumoconiosis. Individuals with Wilson's disease (hepatolenticular degeneration) should not be exposed to copper fume, mist or dust.

## SECTION V - EMPLOYEE PROTECTION

<b>Respiratory Protection:</b>	Use approved dust, fume and mist respirator if exposure exceeds PEL limits.
<b>Eye Protection:</b>	If airborne particles are produced.
<b>Protective Gloves:</b>	None required
<b>Other Protective Equipment:</b>	None required
<b>Ventilation:</b>	Local ventilation recommended if dust level exceeds PEL.

## SECTION VI - FIRST AID

<b>Skin Contact:</b>	Wash off.
<b>Eye Contact:</b>	Flush with water if irritation occurs.
<b>Inhalation:</b>	None necessary.
<b>Ingestion:</b>	None necessary.

## SECTION VII - FIRE AND EXPLOSION DATA

<b>Flash Point</b>	None
<b>Flammable Limits:</b>	N/A                      LEL _____                      UEL _____
<b>Extinguishing Media:</b>	Water, CO <sub>2</sub> , Sand.
<b>Special Fire Fighting Procedures:</b>	Self-contained breathing apparatus, as normal.
<b>Unusual Fire and Explosion Hazards:</b>	Dust from this mixture is normally not explosive, but it may weakly contribute if the event is initiated by another explosive dust or gas. Graphite/metal dust is electrically conductive; dust accumulations may cause electrical short circuits or other electrical malfunctions.

## SECTION VIII - SPECIAL PRECAUTIONS

**Precautions for Handling and Storing:**  
None

**Other Precautions:**

In animals inhalation of copper dust has caused hemolysis of red blood cells, deposition of hmfuscin in liver and pancreas and injury to lung cells. Ingestion has caused other damage in test animals.

## SECTION IX - ENVIRONMENTAL PROTECTION

**Spill or Leak Procedures:**

Use normal housekeeping procedures.

**Waste Disposal Method:**

Bury in an approved landfill. Dispose of according to local, state, and federal regulations.

## SECTION X - PHYSICAL DATA

<b>Boiling Point:</b> Copper 2300°C <b>Melting Point:</b> Copper 1083°C	<b>Vapor Pressure:</b> Negligible at room temperature	<b>Spec. Gravity:</b> 8.9, Copper
<b>Vapor Density:</b> Negligible at room temperature	<b>Evaporation Rate:</b> (_____ = 1) 0	<b>Solubility in Water:</b> Insoluble
<b>Percent Volatile by Weight:</b> <0.1, mixture	<b>Appearance:</b> Gray-copper colored solid	<b>Odor:</b> None

## SECTION XI - REACTIVITY DATA

<input type="checkbox"/> Unstable	<input checked="" type="checkbox"/> Stable	<input type="checkbox"/> Hazardous Polymerization	<input type="checkbox"/> May Occur	<input checked="" type="checkbox"/> Will not occur
<b>Conditions and Materials to Avoid:</b> None				
<b>Hazardous Decomposition Products:</b> Normal combustion can produce CO <sub>2</sub> and CO can be formed in conjunction with copper fume, and copper oxide.				

## SECTION XII - REFERENCES

<b>OSHA:</b>	29 CFR 1910.1000
<b>ACGIH:</b>	Threshold Limit Values for Chemical Substances, current edition
<b>SAX:</b>	Dangerous Properties of Industrial Materials
<b>MSDS:</b>	SGL MSDS 110

DATE 1/4/05  
Replaces 6/1/89