

MATERIAL SAFETY DATA SHEET

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SECTION I - IDENTIFICATION

Company Name: St. Marys Carbon Company
Address: 1939 State Street
St. Marys, PA 15857

Telephone: (814) 781-7333
Prepared by: Phil Schlosser

Product Name: ORGANIC RESISTOR

Chemical Name: MIXTURE

EMERGENCY TELEPHONE #
CHEMTREC 1-800-424-9300

Date Prepared: 01/22/99

Replaces: 04/02/97

<u>Hazard Rating</u>				
Least	Slight	Moderate	High	Extreme
0	1	2	3	4
Health = 1		Fire = 0		Reactivity = 0

SECTION II - HAZARDOUS INGREDIENTS

INGREDIENT	PERCENT	C.A.S. NO.
COPPER	40%	7440-50-8
CARBON/GRAPHITE, NATURAL	<7%	7740-44-0/7782-42-5
*SILICA, CRYSTALLINE QUARTZ	8.6%	14808-60-7
TALC	<9%	14807-96-6
ADDITIVES	Trade Secret	N/A

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SECTION III - OCCUPATIONAL EXPOSURE LIMITS

OSHA PEL: Copper - 1 mg/cubic meter (dust), 0.1 mg/cubic meter (fume)
Silica - 0.1 mg/cubic meter (respirable)
Talc - 20 mppcf (respirable)

ACGIH TLV: Copper - 1 mg/cubic meter
Silica - 0.1 mg/cubic meter (respirable)
Talc - 2 mg/cubic meter (respirable)

CARCINOGEN: NTP - no IARC - *yes OSHA - no

“The product is a solid electrical component and presents no immediate hazards. However, dust created in shipping, handling, and use may exhibit the hazards of the ingredients as described below. AVOID CREATING AND BREATHING DUST FROM THE PRODUCT. Burning of the product may release toxic metallic oxides and irritating vapors.”

SECTION IV - HEALTH HAZARDS

Effects of exposure: Prolonged and repeated overexposure to dust may lead to pneumoconiosis. Dust particles may cause mechanical irritation to the eyes and skin. Individuals with pre-existing chronic respiratory impairment may be at increased risk of pneumoconiosis.

Copper compounds can irritate skin and eyes. Prolonged exposure to skin can cause dermatitis. Embedded particles in eyes can cause inflammation, degeneration of tissues and discoloration. Inhalation of fine dusts can cause metal fume fever (with flu-like symptoms). Ingestion can cause gastrointestinal irritation. Persons with Wilson's disease should not be exposed to copper.

SECTION V - EMPLOYEE PROTECTION

Respiratory Protection: NIOSH approved respirator for dust if exposures are expected to exceed the PELs.

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Eye Protection: Safety glasses with side shields if there is a danger of flying particles.

Protective Gloves: Recommended.

Other Protective Equipment: Normal work clothing.

Ventilation: At point of operation if machining or other dust-creating activities are performed.

SECTION VI - FIRST AID

Skin Contact: Wash affected area with soap and water. especially before eating, smoking, and at the end of work shift.

Eye Contact: Do not rub eyes; immediately flush eyes with plenty of water for at least 15 minutes. Call a physician if irritation persists.

Inhalation: Remove to fresh air and administer artificial respiration if breathing has stopped; oxygen may also be administered. Seek medical attention.

Ingestion: Do not induce vomiting. Seek medical attention.

SECTION VII - FIRE EXPLOSION DATA

Flash Point (method used): Does not flash

Flammable Limits: N/A **LEL:** **UEL:**

Extinguishing Media: Water fog, carbon dioxide, foam.

Special Fire Fighting Procedures: Use self-contained breathing apparatus.

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Unusual Fire and Explosion Hazards:

Copper powder below 50 um particle size is listed as weakly explosive. Carbon/Graphite dusts may weakly contribute if the event is initiated by another explosive dust or gas.

SECTION VIII - SPECIAL PRECAUTIONS

Precautions for Handling and Storing: Handle in a manner which minimizes airborne dust.

Other Precautions: None.

SECTION IX - ENVIRONMENTAL PROTECTION

Spill or Leak Procedures: Normal housekeeping practices; sweep, shovel, or vacuum clean-up with a HEPA filter.

Waste Disposal Method: Reclaim copper or dispose of according to local, state, and federal regulations.

SECTION X - PHYSICAL DATA

Boiling Point (C)	:	2595
Vapor Pressure (mm Hg)	:	N/A
Specific Gravity (H2O=1)	:	2.5 - 3.0
Vapor Density (Air=1)	:	N/A
Evaporation Rate (Butyl Alcohol=1)	:	N/A
Solubility in Water	:	Insoluble
Percent Volatile by Volume	:	N/A
Appearance / Odor	:	Reddish orange, black solid / no odor

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SECTION XI - REACTIVITY DATA

Unstable Stable **Hazardous**
Polymerization: May Occur Will not occur

Conditions and Materials to Avoid: Strong alkalis, chlorates, bromates, mineral acids.

Hazardous Decomposition Products: May yield hydrogen and noxious copper compounds, carbon monoxide, carbon dioxide, formaldehyde, smoke and other possible products unknown.

SECTION XII - REFERENCES

ACGIH: Documentation of Threshold Limit Values

OSHA: 29 CFR 1910.1000, Table Z-1

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This is the end of MSDS 80.