Safety
Data
Sheet

U·E·I Systems
A UEI GROUP COMPANY

9090 Nieman • Overland Park, KS 66214 • (913) 541-0503 • Toll Free: 800-221-9059 • sales@ueisystems.com • ueisystems.com

Section 1 Chemical Product and Company Identification

Product Identifier GPC® MiraCopper,® Uncoated

Product Number IR-CPR7001, IR-CPR7002, IR-CPR7003, IR-CPR7004, IR-CPR7070, IR-CPR7071, IR-CPR7065

General Use Foil stamping or embossing

Company Address UEI Systems®, a UEI Group Company
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Emergency Contact Number CHEMTEL – Available 24 hours/day, 7 days/week
Domestic North America: +1 800 255 3924
International: +1 813 248 0585

Section 2 Hazards Identification

GHS Classification

Hazard Class	Hazard Category	Route of Exposure
Acute Toxicity	3	Oral

GHS Labeling

Contains Copper (7440-50-8)

Danger

Hazard Statement Toxic if swallowed

Precautionary Statements Wash skin thoroughly after handling.
Do not eat, drink or smoke when using this product.

Response **If Swallowed: Immediately call a Poison Center or doctor/physician.**

Specific treatment: See supplemental first aid instructions in Section 4.

Rinse mouth

Storage Store locked up

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations

Section 3 Hazardous Ingredients / Identity Information

	Hazardous Components	CAS No.	%
Metal	Copper	7440-50-8	55–65
	Silver	7440-22-4	<0.1

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Section 4 First Aid Measures

Inhalation Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Ingestion Wash out mouth with water. Call a physician.

Eye Contact Immediately flush eyes with large amounts of water for at least 15 minutes.

Skin Contact Immediately flush skin with large amounts of water for at least 15 minutes while removing contaminated clothing and shoes. Wash hands before eating and smoking.

Section 5 Firefighting Measures

Flammable/Combustible Properties This product does not present fire or explosion hazards as shipped. Dust and fines may be readily ignitable.

Fire/Explosion May be a potential hazard under the following conditions:
- Heavily concentrated dust clouds are dispersed in the air. Dust or fines dispersed in the air can be explosive if subjected to a strong ignition source.
- Molten metal in contact with water/moisture. Moisture entrapped by molten metal can be explosive.

Extinguishing Media Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable Extinguishing Media **Do Not Use:**
- Halogenated agents on dust or fines
- Water around molten metal

These agents will react with the burning material.

Firefighting Equipment/Instructions Firefighters should wear NIOSH-approved, positive pressure, self-contained breathing apparatus and full protective clothing when appropriate.

Section 6 Accidental Release Measures

Personal Precautions Wear gloves and approved respiratory protection if possibility of dust, mist and fume exposure exists.

Environmental Precautions Copper waste is normally collected for recycling. Should waste disposal be deemed necessary, follow Federal, State, or Local regulations.

Methods for Cleaning Up Do not use compressed air for cleaning.

Section 7 Handling and Storage

Do not breathe dust or smoke. Avoid activities that raise dust or smoke. Avoid contact with the eyes and skin. Wash hands thoroughly after handling. Store in a normal dry warehouse.

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Section 8 Component Exposure Limits

	Hazardous Components	CAS No.	OSHA (PEL/TWA)	ACGIH TLV
Metal	Copper	7440-50-8	1 mg/m³, Dust 0.1 mg/m³, Fume	1 mg/m³, Dust 0.2 mg/m³, Fume
	Silver	7440-22-4	<0.1 0.01 mg/m³	0.1 mg/m³

Appropriate Engineering Controls When handling molten copper, protective clothing against metal splashing, face shield, protective gloves and respirator if needed, must be used. Avoid ingestion and inhalation of dust and fumes. Do not eat, drink or smoke during use and wash hands before eating, drinking or smoking.

Personal Respiratory Protection Use NIOSH/MSHA approved dust respirator to avoid excessive inhalation of dust, fume or mist.

Personal Hand Protection Use protective gloves against melt splashing.

Eye Protection Use safety glasses or face shield in exposure to dust, fume or mist and when handling melt.

Skin Protection Protective clothing against melt splashing. Wear trouser legs outside boots to avoid melt entrance in the boots.

Section 9 Physical and Chemical Properties

Appearance/Odor	Light red/No odor	**Odor Threshold**	No data
pH	No data	**Boiling Point**	4,653°F (2,567°C)
Melting Point	>1,982° (1,083°C)	**Solubility (H_2O)**	Insoluble in water
Specific Gravity	No data	**Density**	0.323lb/in³ (8.94g/cc)
Octanol/H_2O Coefficient	No data	**Evaporation Rate**	No data
Molecular Weight	No data	**Decomposition Temperature**	No data
Auto Ignition	No data	**Lower Flammability Limit**	No data
Flash Point	No data	**Upper Flammability Limit**	No data
Vapor Density	No data	**Vapor Pressure**	No data
VOC	No data	**Flammability Class**	No data
Viscosity	No data		

Section 10 Chemical Stability and Reactivity

Stability Stable under normal handling conditions

Incompatibility Strong acids, strong oxidizing agents, acid chlorides, halogens

Hazardous Decomposition/ By-Products Thermal decomposition products of the cured coating may yield small quantities of fine particulates and gases from the fluorpolymer that can include hydrogen fluoride.

Hazardous Polymerization Will not occur

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Section 11 Toxicological Information

Likely routes of exposure Copper may be toxic by inhalation, ingestion, injection, and skin or eye exposure.

Acute Effects

Inhalation Exposure to fumes or dust may cause irritation of the nose and upper respiratory tract, as well as sneezing and coughing. Perforation of the nasal septum can also occur. "Metal fume fever", with respiratory and flu-like symptoms such as chills and muscle aches, may result from exposure to fumes or fine dust. The incidence of copper-induced metal fume fever is low due to the high temperatures required to volatilize copper.

Eye Contact Exposure of the eyes to copper fumes or dust can cause irritation, conjunctivitis, palpebral edema, ulceration and corneal turbidity. Eye irritation, uveitis, abscess and loss of the eye may also occur from the mechanical action of lodged copper particles. Penetration of the eye by fine fragments can result in severe ocular damage. Corneal discoloration (Kayser-Fleischer ring) is a hallmark of Wilson disease.

Skin Contact Skin exposure may cause irritation, itching, eczema, allergic contact dermatitis, hypersensitivity, and a greenish discoloration of the hair, teeth and skin.

Ingestion Acute ingestion of copper salts can cause irritation, severe nausea and vomiting, salivation, abdominal pain, epigastric burning, hemolysis, gastrointestinal bleeding with hemorrhagic gastritis, hematemesis and melena, anemia, hypotension, jaundice, seizures, coma, shock and death. Hepatic and renal failure may develop several days after acute ingestion. Methemoglobinemia may rarely occur. Copper may produce a metallic or sweet taste.

Sensitization Skin exposure may cause irritation, itching, eczema, allergic contact dermatitis, hypersensitivity, and a greenish discoloration of the hair, teeth and skin.

Carcinogenicity **IARC:** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive Toxicity No data available

Teratogenicity No data available

Section 12 Ecological Information

Ecotoxicity No data is available on this product. Individual constituents are as following:

Component	Species	Exposure Time	LC50/EC50/IC50
Copper (7440-50-8)	*Selenastrum capricornatum* (green alga) *Oncorhynchus kisutc*h (coho salmon)	14 days 96 hrs	EC50 85 ug/l LC50 286 ug/l

Persistence/Degradability No evidence was found to indicate that there is any biotransformation process for copper.

Bioaccumulative Potential Copper is accumulated by all plants and animals.

Mobility in Soil Copper is relatively mobile in soils.

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Section 13 Disposal Considerations

Disposal Instructions Dispose in accordance with federal, state, provincial, and local regulations. Regulations may also apply to empty containers. The responsibility for proper waste disposal lies with the owner of the waste. This product may be a candidate for metal reclamation.

Section 14 Transportation Information

The material in not regulated under DOT provisions.

Section 15 Regulatory Information

	SARA[1]	SARA[1] EHS	RCRA[2]	CERCLA[3]	CERCLA[3] RQ	TSCA[4]
Copper	Listed	Not listed	Not listed	Listed per CWA Section 307(a)	5000 lb (2268 kg)	Listed

Component Analysis – State

Component	CA	MA	MN	NJ	PA	RI
Copper (7440-50-8)	N	Y	Y	Y	Y	Y

California Prop 65 This product does not contain a chemical known to the State of California to cause cancer, birth defects or any other reproductive harm.

Section 16 Other Information

UEI Systems® provides the information contained herein in good faith. It is believed to be correct. However it is not all-inclusive and should be used only as a guide. Individuals receiving this information must exercise their independent judgement in determining its appropriateness for a particular purpose. UEI Systems shall not be held liable for any damage resulting from handling or from contact with this product. All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources.

Abbreviations
PEL Permissible Exposure Limit
TLV Threshold Limit Value

End Notes

1. SARA - Signed into law in 1986, the Superfund Amendments and Reauthorization Act (SARA) is an extension of CERCLA, and is intended to encourage and support local and state emergency planning efforts. SARA provides citizens and local governments with information about potential chemical hazards, and calls for facilities that store hazardous materials to provide officials and citizens with data on the type and amount on hand at specific locations. This field states whether a material is listed or not listed in section 372.65 of SARA. EHS - This states if a material is listed or not listed in Appendix B to part 355, the SARA Extremely Hazardous Substances (EHS) section. RQ is the reportable quantity. TPQ is the Threshold Planning Quantity.

2. RCRA - The Resource Conservation and Recovery Act enacted in 1976 and subsequently amended, controls solid-waste disposal and encourages recycling. This states whether a material is listed or not listed under this regulation. If listed the Hazardous Waste Number and waste characterization assigned by RCRA is also provided. 3. CERCLA - Enacted in 1980 and amended thereafter, the Comprehensive Environmental Response, Compensation, and Liability Act provides for identification and cleanup of hazardous materials released on land, into the air, waterways, and groundwater. It covers areas affected by newly released materials and older leaking or abandoned dump sites. This states whether a material is listed or not listed in CERCLA Table 302.4. If listed the section(s) that it is listed under and the Reportable Quantity (RQ) are also provided. 4. TSCA - The Toxic Substances Control Act controls the exposure to and use of raw industrial chemicals not subject to other laws. This states whether the chemical is listed or not listed under this regulation.

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Evidence http://toxnet.nlm.nih.gov/cgi-bin/sis/search2/f?./temp/~tHNrdw:7