Product/Trade Name: **Copper**
NAFTA H.S. DESCRIPTION 8001.20

SECTION 1. IDENTIFICATION

Info furnished by: Hallmark Metals Corporation
Address: 930 Wellington Avenue
Cranston, RI 02910 USA
Emergency Phone: 888 - 467-8000

SECTION 2. HEALTH HAZARDS DATA

TLV: see section 3.
Primary routes of entry: ingestion of dust, inhalation of dust or fume.

Melting, grinding, cutting of copper may produce fumes or dust exposure and breathing these fumes or dust may present potentially significant health hazards. Fumes of copper may cause metal fume fever with flu like symptoms and skin and hair discoloration. While industrial dermatitis has not been reported, keratinization of the hands and the sols of the feet have been reported. Systemically as well, copper dust and fume cause irritation of the upper respiratory tract, metallic taste in the mouth and nausea. Chronic poisoning results in Wilson's disease, characterized by a hepatic cirrhosis, brain damage, demyelination, renal disease and copper deposition in the cornea.

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

Element	CAS	%WT	Carcinogen	TLV/TWA	OSHA PEL ACGIH/OSHA
*Copper	7440-50-8	100	No	0.2 mg/cu m	0.01 mg/cu m OSHA (fume)

*Product contains one or more of these metallic elements in varying percentages by weight.

SECTION 4. FIRST-AID MEASURES

Eye Contact: Check for and remove any contact lenses. Do not use an eye ointment. Seek medical attention.

Skin Contact: After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.
Inhalation: Allow the victim to rest in a well ventilated area. Seek immediate medical attention.. Ingestion: Do not induce vomiting. Loosen tight clothing. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

SECTION 5. FIRE-FIGHTING MEASURES

Use special mixtures of dry chemicals. Do not use water or moist sand. Fire fighters should wear self-contained breathing apparatus and protective clothing.

SECTION 6. ACCIDENTAL RELEASE MEASURES

No special precautions are necessary for spills of bulk material. If large quantities of dust are spilled, remove by vacuuming with a “hepa” filter or wet sweeping to prevent heavy concentrations of airborne dust. Clean-up personal should wear respirators and protective clothing.
Metal can be reclaimed for refuse. Follow federal, state, and local regulations regarding disposal.

SECTION 7. HANDLING AND STORAGE

Store material away from incompatible materials, and keep dust away from sources of ignition.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Use general and local exhaust ventilation to keep airborne concentrations of dust or fume below the TLV. Employees should wear OSAH or NIOSH approved respirators for protection against airborne dust or fumes. Full protective clothing should be worn by workers exposed to heavy concentrations of dust, and showering should be required before changing into street clothes. Gloves and barrier creams may be necessary to prevent skin sensitization and dermatitis.

Approved safety glasses or goggles should be worn when working with dusty material and molten metal. Safety stations should be provided in close proximity to work areas.

Pre-employment and periodic medical evaluations should be provided. Attention should be directed toward skin, eyes, respiratory tract, blood, kidneys, pulmonary function, and neurologic health. Chest x-rays should be included if symptoms are present.

Food should not be consumed in the work area. No smoking in work area. Hands and face must be washed before eating or smoking. Cosmetics should not be applied in areas where this product is used.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Melting Point	1982 ^{o} F
Boiling Point	4678 ^{o} F
Vapor Pressure	Not Volatile
Vapor Density (air is 1)	Not Volatile
Solubility in Water	NIL
Appearance & Color	copper to brass
Specific Gravity g/cc	8.94
Odor	None
% Volatile	Nil
pH	N/A
Evaporation	N/A

SECTION 10. STABILITY AND REACTIVITY

Massive material is stable at ordinary temperatures, but dust presents moderate fire and explosion hazards. Material may be incompatible with acids, bases, and oxidizers. Molten metal may react violently with water. For additional information, users should consult data sheets on individual component elements.

SECTION 11. TOXICOLOGICAL INFORMATION

Inhalation – Harmful if inhaled. Causes respiratory tract irritation.
Ingestion – Harmful if swallowed.
Skin – May be harmful if absorbed through skin. Causes skin irritation.
Eyes – Causes eye irritation.

SECTION 12. ECOLOGICAL INFORMATION

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Metal can be claimed for refuse. Follow Federal, State, and local regulations regarding disposal

SECTION 14. TRANSPORT INFORMATION

No data available

SECTION 15. REGULATORY INFORMATION

Bases on NFPA and NPCA systems
Health – 2
Flammability – 1
Reactivity – 0

SECTION 16. OTHER INFORMATION

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