



Material Safety Data Sheet (MSDS)

Company: Dura-Bar Metal Services 2195 W. Lake Shore Dr. Woodstock, IL 60098-7467	Revised Date: June 2005 (no changes as of January 2008)	Product Identification Numbers: C17510 and C17300
Trade Name (Common Name of Synonym): Copper Beryllium Wrought Irons	Emergency Phone Number: 815-338-3800	
Chemical Name: Copper Beryllium	Form: Continuous Cast Bars, Centrifugal Cast Tubes and Sand Castings	

SECTION I. INGREDIENTS

Ingredient	CAS Number	% Weight C17510 / C17300	Exposure Limits		
			OSHA PEL (mg/m ³)	OSHA SKIN PROTECTION	ACGIH TLV (mg/m ³)
Copper	7440-50-8	Balance	0.1 (Fume); 1(Dust) 0.002 0.1 0.03 - 0.05 1.0	None	0.2 (Fume):1 (Dust) 0.002 0.02 0.05 1.5
Beryllium	7440-41-7	0.40 / 1.85		None	
Cobalt	7440-48-4	- / -		None	
Lead	7439-92-1	- / .030		None	
Nickel	7440-02-0	1.80 / 0.25		None	

Note:
The above listing is a summary of the principle elements. Various grades of metal will contain varying amounts or combination of these elements. Other elements may also be present in minute amounts. N/E means none established.

SECTION II. PHYSICAL DATA

Physical Description: Solid brass color		Solubility in Water: N/A Vapor pressure: N/A
Acidity / Alkalinity: Not Applicable	Approximate Melting Point: C17510 = 1840°F C17300 = 1590°F	

SECTION III. PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: For welding, burning, grinding, cutting and other related operations, local dust extraction should be provided. If fumes or dust cannot be controlled by extraction then an approved respirator should be used to prevent inhalation.	Skin and Ingestion: Gloves and barrier cream may be necessary to prevent skin sensitization and dermatitis. Consumption of food and drink should be conducted away from the work area.
Eyes and Face: The appropriate approved safety glasses or goggles should be worn for welding, burning, grinding, cutting, turning and related operations.	Other Clothing or Equipment: Hand and foot protection: It is advisable to wear suitable hand and foot protection when handling materials in a solid state.

SECTION IV. EMERGENCY MEDICAL PROCEDURES

Inhalation:	Remove to fresh air and seek medical attention.
Eye Contact:	Immediately flush with water to remove particulates; seek medical attention.
Skin Contact:	If irritation occurs, remove clothing, wash with soap and water. If condition persists, seek medical attention.
Ingestion:	If significant amounts of metal are ingested, seek medical attention.

SECTION V. HEALTH AND SAFETY INFORMATION

The wrought alloys identified may contain varying concentrations of the following elements: beryllium, cobalt, copper, nickel and lead. Inhaling metal dust or fume generated by the use of these alloys may cause adverse health effects such as reduced lung function, nasal and mucous membrane irritation. Inhaling beryllium in excess concentrations can cause a serious lung disease: berylliosis. Exposure to dust or fume generated by the use of these alloys may also cause eye irritation, skin rash and effects of other organ systems.

Beryllium, lead, nickel and some of their compounds are listed in the 10th Report on Carcinogens as prepared by the NTP as well as the IARC Monograph Series.

Effects of Acute Exposure:

The metal dust and fumes can cause irritation to the skin, eye and mucous membranes. Contact with cobalt, copper and nickel may cause allergic skin reactions. As dust, powder or fume exposure, which abrades the skin, can cause irritation and dermatitis. Injury to the eyes is generally a result of particulate irritation or mechanical injury to the cornea or conjunctiva by dust or particulate. Excessive inhalation of copper and nickel can cause respiratory irritation, cough, bronchitis, chills, "fume fever" and asthma-like symptoms.

Effects of Chronic Exposure, by Principle Elements:

Copper:	Fumes may cause metal fume fever, with flu-like symptoms and hair and skin discoloration. Keratinization of the hands and feet has been reported.
Lead:	Inhalation or ingestion of lead particles may result in lead-induced systemic toxicity. Symptoms of lead poisoning include abdominal cramps, anemia, muscle weakness and headache. Prolonged exposure can cause behavioral changes, kidney damage, CNS damage and reproductive effects. Lead is considered to be possibly carcinogenic to humans.
Nickel:	The most common ailment arising from contact with nickel or its compounds is an allergenic dermatitis known as "nickel itch", which occurs usually when the skin is moist. Generally, nickel and most salts of nickel do not cause systemic poisoning, but nickel and some nickel compounds have been identified as suspected carcinogens.
Beryllium Cobalt	Respiratory symptoms, weakness, fatigue, weight loss (carcinogenic); cumulative lung damage (Berylliosis) Coughing, dyspnea, decreased pulmonary functioning, low-weight, dermatitis, diffused nodular fibrosis, respiratory hypersensitivity. Asthma, cumulative lung changes, dermatitis.

SECTION VI. FIRE AND EXPLOSION DATA

Castings will not burn or explode. Dust from this product can form explosive mixtures in air. Explosive concentrations are usually very thick dust clouds. Use class "D" fire extinguishing agents and isolate the fire.

SECTION VII. REACTIVITY DATA

Stability: Stable	Incompatibility: Dust from castings may form explosive hydrogen gas when combined with oxidizers, halogens, halogenated hydrocarbons, acids, molten lithium and strong alkalis.
Hazardous Polymerization: Will not occur	Hazardous Decomposition: Metal fume.

SECTION VIII. SPILLS, LEAKS, AND DISPOSAL PROCEDURES

Steps to be taken if material is spilled or released: If castings are damaged, consult with vendor or send to a scrap reclaimer.

Disposal: Metal working wastes may be classified as "hazardous waste" or as some other form of regulated waste. Consult with federal, state and local officials regarding waste determinations and proper disposal.

SECTION IX. CONTROL MEASURES

Ventilation:	Required if dust or fumes is created in the handling or working of this material.
Local Exhaust:	Same as "Ventilation". However, consult with local and state environmental agencies for air pollution control requirements.
Mechanical (General):	Same as above, to reduce airborne dust and fume.
Work/Hygiene Practices:	Evaluate jobs done on this product and meet requirements of all applicable OSHA and environmental standards.

SECTION X. SPECIAL PRECAUTIONS AND OTHER COMMENTS

NOTICE: This product contains a toxic chemical or chemicals, subject to the reporting requirements of Section 313, Title III or SARA and of 40 CFR Part 372.

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