



HUSSEY COPPER LTD.

LEETSDALE, PA 15056

MATERIAL SAFETY DATA SHEET

SECTION I

MANUFACTURER'S NAME: HUSSEY COPPER LTD.
ADDRESS: 100 WASHINGTON STREET, LEETSDALE, PA 15056
EMERGENCY PHONE NO.: 724-251-4200
CHEMICAL NAME AND SYNONYMS: COPPER, NICKEL
TRADE NAME AND SYNONYMS: CUPRO NICKEL, 90/10, 70/30, CDA ALLOY 706, 715
CHEMICAL FAMILY: COPPER AND NICKEL

SECTION II - HAZARDOUS INGREDIENTS

INGREDIENT	PERCENT		CAS NO.	OSHA-PEL/ACGIH-TLV
	706	715		
*COPPER	86.5	65.0 Min.	7440-50-8	FOR EXPOSURE LEVELS SEE SECTION V
*NICKEL	9.0 - 11.0	29.0 - 32.0	7440-02-0	
IRON	1.0 - 1.75	1.0 Max	(iron) 1309-37-1	
*MANGANESE	.75	.25 - 1.0	(oxide) 7439-96-5	

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS OR GASES: If exposure to copper dust/fume is kept below Permissible Exposure Limits (PEL)/Threshold Limit Value (TLV) all trace elements should not pose any health risk. *Chemical(s) listed as a toxic chemical subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

SECTION III - PHYSICAL DATA

Melting Point:	<u>Alloy 706</u> 2010° F	<u>Alloy 715</u> 2140° F
Vapor Pressure (mm Hg.)	Not Applicable	Not Applicable
Solubility in Water:	Negligible	Negligible
Specify Gravity (H ₂ O = 1)	8.94	8.94

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method used) Not Applicable *
Extinguishing Media Not Applicable
Special Fire Fighting Procedures Not Applicable
Unusual Fire and Explosion Hazards Not Applicable

***Under normal conditions. Heavy concentrations of fine copper dust may cause flash fire if exposed to ignition source.**

SECTION V - HEALTH HAZARD DATA

EXPOSURE LEVELS: Copper dust and mists - OSHA (PEL): TWA = 1 mg/m³. ACGIH (TLV): TWA = 1 mg/m³.
Copper fumes - OSHA (PEL): TWA = 0.1 mg/m³. ACGIH (TLV): TWA = 0.2 mg/m³.
Nickel - OSHA (PEL): TWA = 1 mg/m³. ACGIH (TLV): TWA = 1 mg/m³.
Iron Oxide Fume (Fe₂O₃) - OSHA (PEL): TWA = 10 mg/m³. ACGIH (TLV): TWA = 5 mg/m³.
Manganese - OSHA (PEL): CEILING = 1 mg/m³.

CARCINOGENICITY: Nickel is listed by NTP as an anticipated human carcinogen and by IARC as a probable human carcinogen. Other ingredients are not listed with NTP, IARC, or OSHA.

EFFECTS OF OVEREXPOSURE (ACUTE): Fumes of copper and manganese may cause metal fume fever with flu-like symptoms, metallic tastes, chills, fever, cough, congestion, nausea. Overexposure to manganese fumes can cause chronic manganese poisoning. Early symptoms include headaches, apathy, sleepiness, and weakness or cramps in the legs.

Chronic overexposure can affect the central nervous system, ultimately leading to emotional disturbances, gait and balance difficulties and paralysis.

Nickel / nickel compounds have been associated with allergic reactions and rashes, and lung changes. Nickel is a respiratory irritant and can cause pneumonitis. Overexposure to dusts and especially fumes of nickel alloys may cause skin, nose, mouth, and eye irritation and lung changes in workers, potentially leading to pulmonary diseases.

EMERGENCY FIRST AID PROCEDURES:

- Skin: Flush thoroughly with water.
- Eyes: Flush with water, call Physician.
- Ingestion: Drink water, induce vomiting, call Physician.
- Inhalation: Remove victim to fresh air, call Physician.

Copper fumes, dusts and mists are listed by OSHA as air contaminants (29 CFR 1910.1000 Sub-part Z)

PRIMARY ROUTE(S) OF ENTRY: Inhalation

SECTION VI - REACTIVITY DATA

STABILITY: Stable

INCOMPATIBILITY: (Material to avoid): Dust and fumes: acetylene, chlorine - Metals: acids and oxidizers.

HAZARDOUS DECOMPOSITION PRODUCTS: Copper fumes/dust.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Dust or fume: wear respirator, follow OSHA use instructions, shovel up, or vacuum and place in approved DOT container and seal. Wash contaminated clothing.

WASTE DISPOSAL METHOD: Dispose of contaminated product and materials used in cleaning up spills or leaks in a manner approved for this material. Follow federal, state and local regulations for disposal.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (DUST/FUME): Dust or fume: NIOSH/MSHA approved, dust/fume respirator.

VENTILATION (DUST/FUME): Local exhaust - if exposure levels exceeded.

EYE PROTECTION (DUST): Goggles.

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Avoid breathing dust or fumes. Do not take internally. Practice good housekeeping and personal hygiene procedures. Preclude from exposure to fume or dust those individuals with diseases of the skin, sinuses, and lungs.