COPPER LUGS
MATERIAL SAFETY DATA SHEET

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product Identity: Copper Lugs

Manufacturer:
M.G.ELECTRICA
F-41, MIDC Satpur Indl Area
Nasik-422 007,
Maharashtra,
India
Tele: 0253-2350961

MSDS Preparer:
M.G.ELECTRICA
F-41, MIDC Satpur Indl Area
Nasik-422 007,
Maharashtra,
India
Tele: 0253-2350961

Date of Last MSDS Revision: March, 18, 2011

Raw Material Use: Copper Tube, Copper Sheet

SECTION 2. COMPOSITION / INFORMATION ON INGREDIENTS

Material	Approximate Percent by Weight	CAS No.	Permissible Air Concentration (mg/m^3)
Copper	99.99 %	7440-50-8	OSHA/PEL: 0.1 (fume) 1.0 (dust) ACGIH/TLV 0.2 (fume) 1.0 (dust)

Note: OSHA – Occupational Safety and Health Administration; **ACGIH –** American Conference of Governmental Industrial Hygienists; **PEL –** Permissible Exposure Limit; **TLV –** Threshold Limit Value

SECTION 3. HAZARDS IDENTIFICATION

Routes of entry:
Inhalation : Yes
Dermal : Yes
Ingestion : Yes

Overview: Copper form explosive mixture if dispersed in air as a fine powder, or exposed to heat or flames.
Metal is non-toxic but cause immediate hazard to personnel or environment.

Potential Health Effects: Inhalation of fumes or dust may result in irritation to nasal mucous membrane, and irritation to upper respiratory tract. Symptoms are like nausea, vomiting, fever, chills. Ingestion of copper metal may cause nausea, vomiting, head ach, dizziness, and gastrointestinal irritation. Direct Eye contact may cause redness and pain. Skin may irritates during direct contact.

Potential Environmental Effects: Copper is insoluble in water and hence it has low bioavailability. But long exposure may release bioavailable forms of constituents which is toxic to aquatic organisms.

SECTION: 4 FIRST AID MEASURES

Eye Contact: Do not allow victim to rub eye(s). Let the eye(s) water naturally for few minutes. Flush with slightly warm water, gently flowing water for five minutes, while holding eyelid(s) open. In extreme case, seek medical attention. DO NOT attempt to remove manually.

Skin Contact: No health effects expected. If irritation occurs, flush with lukewarm, gently flowing water for 5 minutes. Obtain medical advice if any emergency.

Inhalation: Move the victim to fresh air. If any symptoms of metal fume fever develop, obtain medical attention.

Ingestion: Never give anything by mouth if victim is rapidly losing consciousness, unconscious, or convulsing. Let the victim rinse mouth thoroughly with water. DO NO INDUCE VOMITTING. Have victim drink 60-240 ml of water. If vomiting occurs naturally, have victim rinse mouth with water again. Obtain medical advice for any emergency.

SECTION 5. FIRE FIGHTING MEASURES

Flash Point: NA

Upper and Lower Flammable Limit: NA

Auto ignition Temperature: NA

Fire and Explosion Hazards: Finely divided copper metal dust or powder may be flammable or explosive when dispersed in the air at high concentrations and exposed to heat, flame, or other ignition sources.

Extinguishing Media: DO NOT use water, carbon dioxide, and foam. Apply dry sand, or chemical powder.

SECTION 6. ACCIDENTAL RELEASE MEASURES.

Personal Precautions: Wear protective clothing, gloves, and respirator. Close fitting safety goggles should use to protect eyes from dust and fume.
Environment Precautions: Have potential to pose ecological effects to aquatic life forms under certain chemical conditions. Releases of the product to water and soil should, therefore be prevented.

Procedures for cleanup: Powder or dust should be cleaned up using methods which will minimize dust generation (e.g. vacuum solids, dampen material and shovel or wet sweep)

SECTION 7. HANDLING AND STORAGE

Storage Temperature: Room Temperature

Average Shelf Life: NA

Storage Conditions: Store copper in a dry, covered area.

Other Precautions: Refrain from eating, drinking, or smoking in work areas. Thoroughly wash hands before eating, drinking, smoking in appropriate areas.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Protective clothing: gloves and work clothing are recommended to prevent prolonged and regular direct skin contact. Close fitting goggles should be worn where fume or dust is generated. Safety type boots are recommended.

Ventilation: use adequate local or general ventilation to maintain the concentration of copper fumes in working environment.

Respirators: use proper respiratory protection equipment.

SECTION 10. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	**Odour:**	**Physical state:**	**Boiling Point:**
Reddish Metal	None	Solid	2595°C
Solubility:	**Specific Gravity:**	**pH:**	**Melting Point:**
Insoluble	8.94	NA	1083°C

Chemical Name:	**Chemical Formula:**	**Chemical Family:**
NA	Cu	Transition Metal

SECTION 11. STABILITY AND REACTIVITY

Stability & Reactivity: Copper is stable and not considered reactive under normal temperatures and pressures.

Hazardous Decomposition Products: High temperature operations generate fumes which contain copper oxides, and which, on inhalation in sufficient quantity, can produce metal fume fever.

Incompatible Materials: Halogens of barium, calcium, magnesium, potassium, zinc.

SECTION 12. TOXICOLOGIECAL INFORMATION

General: Copper can become toxic when inhaled or ingested in large doses. The major route of exposure would be through the generation and inhalation of copper oxide fume.

Acute Skin/Eye: This may cause local irritation, but would nor cause tissue damage.

Inhalation: an intense, short term exposure to fumes may result in the condition called metal fume fever. The symptoms are immediate dryness and irritation of throat, tightness of the chest, coughing, fever, malaise, perspiration, frontal headache, muscle cramps, low back pain, nausea and vomiting.

Ingestion: large quantities of copper salts have reported gastrointestinal effects including vomiting, diarrhea, nausea, abdominal pain and a metallic taste in the mouth.

Chronic: irritation to eye and skin may take place after prolonged exposure. Copper is not listed as such a human carcinogen.

SECTION 12. ECOLOGICAL INFORMATION

Copper metal is insoluble in water, and therefore, generally has low bioavailability. Long term exposure in aquatic and terrestrial environments, can lead to release of constituent copper compounds in more bioavailable forms. These all have potential to yield toxic effects under specific chemical conditions. Mobility of copper compounds in soluble forms is media-dependant. They can bind with inorganic and organic ligands, reducing their mobility and bioavailability in both soil and water.

SECTION 13. DISPOSAL CONSIDERATIONS

If material cannot be returned to process or salvage, dispose according to applicable regulations.

SECTION 14. TRANSPORT INFORMATION

No special shipping or transportation is required

SECTION 15. REGULATORY INFORMATION

Federal and state regulations:

Pennsylvania RTK: Copper Massachusetts RTK: Copper TSCA8C (b)

Inventory: Copper CERCLA: Hazardous substances; copper

DISCLAIMER OF LIABILITY

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