Material Safety Data Sheet

Identity: Copper

SECTION I - GENERAL INFORMATION

Manufacturer: Advanced Engineering Materials Limited (AEM)

The information below is believed to be accurate and represents the best information available to AEM. However, AEM makes no warranty, expressed or implied with respect to such information and assumes no liability resulting from its use.

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

<table>
<thead>
<tr>
<th>CAS #</th>
<th>OSHA/PEL</th>
<th>ACGIH/TLV</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>7440-50-8</td>
<td>N/A</td>
<td>N/A</td>
<td>100 wt%</td>
</tr>
</tbody>
</table>

SECTION III – PHYSICAL/CHEMICAL CHARACTERISTICS

Physical States: Solid

Boiling Point: N/A  
Melting Point: 1083 °C  
Evaporation Rate: N/A  
Solubility in Water: Insoluble

Vapor Pressure (vs. air or mm Hg): N/A  
Specific Gravity: (H2O=1): N/A  
Flash Point: 2562 °C

Stability: Stable under recommended storage conditions
Reacts With: Acids, Oxidizing agents
Incompatible Conditions: Protect against electrostatic charges
Hazardous Decomposition Products: Metal oxide fume, copper oxides
Appearance and odor: Metallic light brown

SECTION IV - FIERST AID PROCEDURES

General Treatment: Seek medical attention if symptoms persist.
Special Treatment: None
Important Symptoms: None

Inhalation: Remove victim to fresh air. Supply oxygen if breathing is difficult.
Ingestion: Seek medical attention
Skin: Wash affected area with mild soap and water. Remove any contaminated clothing.
Eyes: Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

SECTION V - FIREFIGHTING MEASURES

Flammability: Flammable as powder only

Extinguishing Media: Do not use water for metal fires – use CO2, sand, extinguishing powder.
Spec. Fire Fighting Procedure: Use full-face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. See section 10 for decomposition products.

SECTION VI - ACCIDENTAL RELEASE MEASURES

If Material Is Released/Spilled: Wear appropriate respiratory and protective equipment specified in special protection information. Isolate spill area and provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for disposal. Take care not to raise dust.
Environmental Precautions: Isolate runoff to prevent environmental pollution.

SECTION VII - HANDLING AND STORAGE

Handling Conditions: Wash thoroughly after handling.
Storage Conditions: Store in a cool dry place in a tightly sealed container. Store apart from materials and conditions listed in section 10.
Work/Hygienic Maintenance: Do not use tobacco or food in work area. Wash thoroughly before eating and smoking. Do not blow dust off clothing or skin with compressed air.
Ventilation: Provide sufficient ventilation to maintain concentration at or below threshold limit.

SECTION VIII - EXPOSURE CONTROLS AND PERSONAL PROTECTION

Permissible Exposure Limits: 0.1 mg/m3 as Cu, metal fume, long-term value
1 mg/m3 as Cu, metal dusts and mists, long-term value

Threshold Limit Value: 0.2 mg/m3 as Cu, metal fume, long-term value
1 mg/m3 as Cu, metal dusts and mists, long-term value

Special Equipment: None
Respiratory Protection: Dust Respirator
Protective Gloves: Rubber gloves
Eye Protection: Safety glasses or goggles
Body Protection: Protective work clothing. Wear close-toed shoes and long sleeves/pants.
SECTION IX - TOXICOLOGICAL INFORMATION

Potential Health Effects:

   Eyes: Causes serious eye damage
   Skin: May cause irritation
   Ingestion: May cause irritation
   Inhalation: May cause irritation
   Chronic: N/A

Signs & Symptoms: N/A

Aggravated Medical Conditions: N/A

Median Lethal Dose: >5000 mg/kg for mouse by mouth

Carcinogen: The Registry of Toxic Effects of Chemical Substances (RTECS) contains tumorigenic and/or carcinogenic and/or neoplastic data for this substance.

EPA-D: Not classifiable as to human carcinogenicity: inadequate human and animal evidence of carcinogenicity or no data are available.

Please be advised that N/A can either mean Not Applicable or No Data Has Been Established