

**MATERIAL SAFETY DATA SHEET****Bronze Powder****Page 1 of 4****1.) Product & Company Identification**

Supplier : Me-Toz Metal Tozları Makina Yedek Parça San.Tic.Ltd.Şti.  
Altintepe Mah. İlkbahar Çıkmazı Sk. No.3 K.2 D.3 Maltepe - İstanbul  
Emergency Contact : TEL : 0090 216 489 45 40 GSM : 0090 532 282 3749  
Manufacturer : Me-Toz Metal Tozları Makina Yedek Parça San.Tic.Ltd.Şti.  
Altintepe Mah. İlkbahar Çıkmazı Sk. No.3 K.2 D.3 Maltepe - İstanbul  
Product Name : Bronz Powder

**2.) Composition / Information on Ingredients**

Composition % : Cu % 84 – 96 Sn % 4 – 16  
Particle Shape : Irregular  
Appearance : Dull grayish-orange

**3.) Hazards Identification**

Eye Hazards : No significant irritation expected other than possible mechanical irritation.  
Skin Hazards : No significant irritation expected other than possible mechanical irritation..  
Ingestion Hazards : No significant health hazards identified.  
Inhalation Hazards : No significant irritation expected other than possible mechanical irritation. Dust or fume from metallizing, welding or similar processes can cause respiratory irritation and/or metal fume fever (nausea, vomiting, fever, diarrhea).

**4.) First Aid Measures**

Eye : Flush eyes with plenty of water, lifting the upper and lower eyelids occasionally. Get medical attention if irritation develops.  
Skin : Wash the skin using soap or a mild detergent and warm water.  
Ingestion : If person is conscious, rinse mouth and give large quantities of water to drink. Get medical attention.  
Inhalation : Move the exposed person to fresh air at once. If breathing has stopped, perform artificial respiration. Get immediate medical attention. Fume from metallizing, welding or similar processes can cause respiratory irritation and/or metal fume fever (respiratory irritation, chills, nausea).

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- Fire and Explosion Hazards : Copper powder with particles sizes 50 µm size range are classified as weakly explosive by the U.S. Bureau of Mines Report RI-6516. When present as a dust cloud, will NOT explode readily in air. Not easily ignited by sparks.
- Extinguishing Media : Graphite, dolomite or sodium chloride. Do NOT use water..
- Fire Fighting Instructions : Wear full bunker gear including a positive pressure self-contained breathing apparatus.
- Precautions : Keep away from ignition sources (e.g., heat and open flames). None required. Keep container closed.
- Hazardous Decomposition : Upon heating in the presence of air, material decomposes to sulfur dioxide, cuprous oxide and copper sulfate.

**6.) Accidental Release Measures**

1. Restrict the area to those persons wearing respiratory protection. Do not allow unprotected people into the area until cleanup has been completed.
2. Ventilate the area thoroughly.
3. Collect the powder in a manner that minimizes further dust generation (i.e., use wet or HEPA vacuum methods).
4. Keep out of sewers and waterways.
5. Recycle or dispose of as a waste (see Section 13).

**7.) Handling and Storage**

1. Avoid dust generation.
2. Wash thoroughly after handling.
3. Avoid dust generation from dried paste.
4. Store powder in a dry area, -18° to 38°C.

**8.) Exposure Controls / Personal Protection**

- Ventilation Requirements : Keep dust and fume levels below occupational exposure limits. Local exhaust ventilation may be necessary for some operations.
- Eye/Face Protection : Wear dust-proof safety goggles. Contact lenses are not recommended.

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Skin Protection : None required; however, use of protective gloves and clothing is good industrial practice. The use of impervious gloves or barrier cream to protect skin is recommended.

Respiratory Protection : Do not breathe dust or fume. Use with adequate ventilation. If ventilation is inadequate, use NIOSH/MSHA approved respirator.

**9.) Physical and Chemical Properties**

Appearance : Fine Powder  
Particle shape : Irregular  
Colour : Dullgrayish-orange  
Odour : Odourless  
Physical State : Solid  
Chemical Type : Pure  
Vapor Pressure : 1 mm Hg @ 1628°C  
Vapor Density : N/A  
Solubility : Not soluble in water  
Flash Point : Above 700°C  
Flammability : Non-flammable  
Melting point : About 1010°C  
Relative Density : 3,1 – 3,4 (Water : 1)

**10.) Stability and Reactivity**

Stability : Stable to ignition temperature of 700°C..

Hazardous Polymerization : will not occur

Incompatible Materials : Copper is explosively incompatible with sodium azide. Copper dusts may react with acetylene gas to form copper acetylides, which are sensitive to shock. Copper mists may react with magnesium to form flammable hydrogen gas. Tin reacts with concentrated acids. Contact with chlorine may result in ignition. A vigorous reaction and incandescence is observed with sulfur. Fires and explosions can result when tin contacts turpentine.

Hazardous Decomposition Products : None identified..

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Copper is an essential element of mammalian metabolism. Copper metal has little or no serious toxicity. The most common adverse effect associated with copper is the acute inhalation of copper fume during refining or welding. Inhalation of copper fume or dust may result in metal fume fever, which is characterized by upper respiratory irritation, chills, metallic or sweet taste, nausea, and aching muscles. Attacks usually begin after 4-8 hours of exposure and last only 24-48 hours. Inhalation of fumes has been reported to sometimes cause discoloration of the skin and hair. Nausea and vomiting may result if large amounts of copper metal are ingested. This is probably due to the conversion of the swallowed metal copper to its irritating salts. It is unlikely that poisoning by ingestion in industry would progress to a serious point because small amounts induce vomiting, emptying the stomach of copper salts. High airborne concentrations of copper metal would be expected to cause mechanical irritation of the eyes and respiratory tract. Metallic copper may cause keratinization of the hands and soles of the feet, but it is not commonly associated with industrial dermatitis.

Metallic tin is relatively non-toxic. Exposure to dust or fumes of inorganic tin salts is known to cause benign inflammation of the lung tissue (stanosis), a condition in which there is no distinctive fibrosis, no evidence of disability, and no special complicating factors. No component of this product present at levels greater than 0.1% is identified as a carcinogen by the U.S. National Toxicology Program, the U.S. Occupational Safety and Health Act or the International Agency for Research on Cancer (IARC).

**12.) Ecological Information**

No data on the ecological effects of this product have been developed.

**13.) Disposal Considerations**

Disposal must be in accordance with applicable local, state and federal regulations (contact local, state, or federal environmental agency for specific rules). Do not dump into sewers, on the ground, or into any body of water.

**14.) Transport Information**

DOT	: RQ, Environmentally Hazardous Substance, Solid, NOS (contains Copper), Class 9, UN3077, PG III, Marine Pollutant
DOT EXCEPTION	: Under 49 CFR 171.4, except when transporting aboard a vessel, the requirements of this subchapter specific to marine pollutants do not apply to non-bulk packaging transported by motor vehicles, rail cars and aircraft.
ADR/RID	: Not regulated
IMO/IMDG	: RQ, Environmentally Hazardous Substance, Solid, NOS (contains Copper), Class 9, UN3077, PG III, Marine Pollutant
ICAO/IATA	: Not regulated if shipped in non-bulk packaging
REPORTABLE QUANTITY	: Copper 5,000 lbs

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**15.) Regulatory Information**

Health Hazard : 1 - Slight: Slightly Toxic - May cause slight irritation  
Flammability Hazard : 0 - Minimal: Will not burn under normal conditions  
Reactivity Hazard : 0 - Minimal: Normally stable, does not react with water  
Maximum Personal Protection : E - Safety Glasses, Gloves & Dust Respirator

**OCCUPATIONAL EXPOSURE LIMITS**

**Copper Dust and Mists**

CAS# 7440-50-8  
EINECS# 231-159-6  
ACGIH TLV 1.0 mg/m<sup>3</sup>  
NIOSH IDLH 100 mg/m<sup>3</sup>  
OSHA PEL 1.0 mg/m<sup>3</sup>  
IDLH= Immediately dangerous to life and health.

Copper is on the SARA Title III, Section 313 Toxic Chemicals List.

**Copper Fume**

ACGIH TLV 0.2 mg/m<sup>3</sup>NIOSH IDLH 100 mg/m<sup>3</sup>  
OSHA PEL 0.1 mg/m<sup>3</sup>  
IDLH= Immediately dangerous to life and health.

Copper is on the Sara Title III, Section 313 Toxic Chemicals List.

**Tin**

ACGIH TLV 2.0 mg/m<sup>3</sup>  
OSHA PEL 2.0 mg/m<sup>3</sup>  
NIOSH IDLH 100 mg/m<sup>3</sup>  
IDLH= Immediately dangerous to life and health.

All chemical constituents of these products are listed on the TSCA inventory of chemical substances maintained by the U.S. Environmental Protection Agency (EPA).

**16.) Other Information**

No Data Available...

**Disclaimer**

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained therein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of this product's use. Each individual must make his/her own determination as to the suitability of the information for such purpose(s) or use.

Metoz Metal Tozları Makine Yedek Parça San. Tic.Ltd.Şti.