# **COPPER WIRE**

## **Applications:**

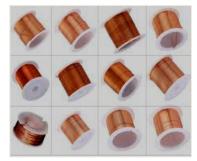
- Solid state physical application, chemical, nuclear, avionics, instrumentation, bio-medical, genetics
- MEMS, medicinal/environmental/toxicology/polymers/heavy electrical engineering, semiconductors
- Precision capacitor/resistance/reactor, electrical actuator(linear/rotary),

**Introduction:** MCMF series of precious metal/copper foils/wires are high purity without alloying. These exhibits high shear yield stress/hardness/corrosion resistant/thermally stable and other improved properties. These metal foils/wire are available in more than 10 grade with different dimensional/ specifications virtually meeting all industrial/research-development specifications. These are available for some critical physical conditions like cryogenic/high temperature range meeting other related corrosion/environmental/tribological/chemical and thermodynamical aspects. Tailor-made wires are also available.

#### **Benefits:**

- High purity./Uniform/consistent dimension.
- High electrical conductivity.
- > Stable electro-metallurgical property.
- Compact with high tolerance
- > No- erratic TCR ./ Large pulse current/weight ratio,
- large surface temperature< +/- upto 2 K To 750 degree cel</p>







Platinum wires/performs/foils

High conductivity Copper wire

High conductivity copper /silver wire

# **Mechanical/Electrical Specifications:**

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Properties	Technical Specifications
Operating temperature (enameled/bare)	2 K/750 deg.C
Density g/cube.cm(typical) (enameled/bare)	8.96/7.8
TCR	4.09/4.02×10 <sup>-3</sup>
Electrical Conductivity (S/meter)	5.96×10 <sup>7</sup>

Data is calculated with and without metal foils applied and may vary from lot to lot.

#### General Electrical/Mechanical Technical Specifications:

Size: 45—55 swg TCR: as above

Operating temperature: as above Electrical conductivity: as above Terminal: tin coated copper

Coating: poly-imide in case of enamelled

Temperature coefficient (-55°C-750°C): ±350PPM/°CMax

Short-term over load:1000%rated power 5s

Rated Load Rated wattage 30 min:  $\Delta R \le \pm (2\% + 0.05\Omega)$ 

Insulation Resistance: 5-6 over  $1000M\Omega$ 

Moisture Resistance: 1000hr △R≤± (2%R0+0.05Ω)

Moisture-Proof load life (40 °C 95%RHon ~ off cycle 1000 hrs.): ΔR≤± (5%Ro+0.1Ω)

Load Life 40 °C 95%RHon ~ off cycle 1000 hrs.

Terminal tensile strength: 22.2N for 5w-25w, 44.4N for all other Dielectric resistance of coating: 500 volt/1000 volt/3000 volt

### Application notes:

**K**eep the precious metal foils/wire in cool.

Miminum ordering quantity is 1.0 kilo grams.

All the surfaces must be clean and preconditioned before its use.

Company makes no warranty expressed or implied. concerning the use of this product and users shall assumes all risk of use or handling whether or not in accordance with directions suggestion, or used singly or in combination with other product.

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