Technical datasheet CUPROFOR® / UNS C15600

CUPROFOR® is a doped copper grade which exhibits high electrical and thermal conductivity combined with good mechanical properties and excellent thermal stability.

Available products

Strip	0.05 – 3.5 mm
Wire	1 – 12 mm dia

Chemical composition (%)

Cu	Co	P
Balance	0.209	0.095

Physical properties

Density	8.9 g/cm^3
Melting point	1080 °C
Coefficient of expansion 0-200°C	16.7 x10^{-6}/°C
Resistivity at 20°C	2.05 ±0.25 µΩ-cm
Electrical conductivity at 20°C	85 % IACS
Thermal conductivity at 20°C	338 W/m.°C
Thermal diffusion at 20°C	1cm^2/s

Mechanical properties

Temper	AFNOR	Tensile strength (MPa)	Yield strength (MPa)	Elongation (%)	Vickers hardness
¼ hard	TL1	320-400	≥220	≥15	100-125
½ hard	TL2	350-440	≥300	≥10	115-140
Hard	TL4	430-500	≥360	≥4	135-160
Spring	TL5	≥500	≥450	2	≥150

Key attributes

CUPROFOR® is especially suited to applications in electronics and electro technology. It has high thermal conductivity to dissipate heat and sufficient temperature resistance to permit soldering without any loss of mechanical properties. It also possesses high mechanical properties and is formable. Because it does not contain elements such as Cr, Fe and Cd it reduces the wear of blanking out tools used in high speed presses. It is very suitable for soldering and is ideal for electroplating and electroless nickel plating.

CUPROFOR® is used in the manufacture of high power transistor supports, integrated circuits, electrical contacts and shunts

Applications

Electro-technical/electronics:
- Electrical contacts
- Contact mounts
- Push buttons
- Conductive parts
- Electrical connections and terminals

Other fields:
- Heat exchangers
- Seals and washers

lebronze alloys

BIBUS METALS SUPPORTING YOUR SUCCESS