Product: WCu 70/30

Manufacturing: powder metallurgy (mixing, pressing, infiltration) and mechanical processing.
Material properties are measured at room temperature on separate test specimens.

1. Chemical Composition

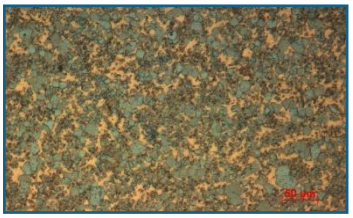
Element	Range (Min. – Max.)	Typical value
Tungsten	68.0 – 72.0 %	70.0 %
Copper	28.0 – 32.0 %	29.6 %
Additives	< 0.6 %	0.4 %

2. Mechanical and Physical Properties

Property	Range (Min. – Max.)	Typical value
Density [g/cm^3]	14.0 – 14.	14.2
Thermal conductivity [W/mK]	160 – 180	170
Coefficient of thermal expansion. [1/C]	10.7 – 10.9 x 10^{-6}	10.8 x 10^{-6}
Electrical. Conductivity [% IACS]	42 – 44	43
Hardness [HV10]	180 – 220	200
Tensile strength [MPa]	440 – 550	500
Modulus of elasticity [Gpa]	220 – 240	230

3. Metallography

The microstructure consists of two phases: a tungsten phase (dark phase) and a copper phase (light phase). Both phases are homogeneously distributed, as can be clearly seen in the photo. The particle size of the tungsten-rich phase is ideally between 3 and 25 µm, which ensures optimal material properties.



4. Applications

Electrode Material for Die-Sinking electrical discharge machining (EDM)
Electrode material for resistance welding
Contact material for electrical devices and high-voltage switches
Material for mass balancing

5. Standards and Certificates

Our WCu products are fully comply with the ASTM B702 standard and the DIN EN ISO 5182 standard.
Upon request, we are pleased to provide factory certificates in compliance with EN 10204, available as either a 2.2 or 3.1 inspection certificate

6. Delivery Program

Rods, bars, discs (in stock), plates, tubes, and finished parts according to technical drawings.

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