

Material Datasheet

Tungsten-Copper (WCu)

Material description

eForged tungsten-copper composites of RWMA Group B Class 11-12 / ISO Grade 5182-2016 Group B type 10-11.

Higher hardness, finer and more homogeneous material microstructures than conventional metal infiltrated tungsten copper, thanks to the combination of ball milling and eForging.

Mechanical and physical characteristics at room temperature

	W75-Cu	W75-Cu HC	W80-Cu
Chemical composition %	W: 75 ±1 Cu: 25 ±1	W: 75 ±1 Cu: 25 ±1	W: 80 ±1 Cu: 20 ±1
Mass density [g cm ⁻³]	14.9 ±0.1	14.9 ±0.1	15.7 ±0.1
Hardness HV1	300 ±10	260 ±10	320 ±12
Electrical conductivity[†] [%IACS] [MS·m ⁻¹]	40±1 23±1	47±1 27±1	38±1 22±1

[†]measured by phase-sensitive eddy current test method (DIN EN 2004-1)

Forms Available

Shape	Base Sizes	Height
Cylinders 	Min Ø 5 mm Max Ø 30 mm	Min height 0,5 mm Max 15 mm
Bars 	Min section 3x3 mm Max section 15x15 mm	Min height 3 mm Max height 50 mm
Blocks 	Min base 5x3 mm Max base 15x50 mm	Min height 0,5 mm Max height 15 mm
Custom shapes 	<i>Special shapes on request</i> <i>Surface area: 5 to 650 mm²</i> <i>Inclined surfaces possible</i>	

Machinability and soldering

These materials can be machined with conventional carbide cutting tools.

Solders used for RWMA Group B are recommended.

Health and Safety

No substances classified under the Annex XVII to REACH are used in this group of materials. Cobalt, Chromium, Nickel, and Beryllium free.