WIRBALIT® KW
Tungsten copper

ASTM standards ASTM B702 (tungsten copper alloy)

Tungsten copper is produced by infiltrating a blank of tungsten powder with liquid copper. Another manufacturing process is liquid phase sintering.

This composite material is used to interconnect the properties of tungsten (e.g. hardness, wear and erosion resistance) and copper (e.g. electrical conductivity).

		WCu 50/50	WCu 75/25	WCu 80/20	WCu 90/10
Copper Cu	%	50 ±2	25 ±2	20 ±2	10 ±2
Tungsten W	%	Rest	Rest	Rest	Rest
Additive	max. %	1	1	1	1
Hardness	HRB	69-83	89-102	94-106	-
Tensile strength	Rm MPA	344-413	585-654	620-689	700
Elongation at 20 °C	%	12,5	9,0	8,3	6,5
E-module	GPA	-	260	280	290
Linear expansion coefficient	10^{-6} K^{-1}	13,0	9,5	8,8	>7,5
El. conductivity	% IACS	56-64	41-48	38-45	<30
Thermal conductivity at 25 °C	W/Km	310 - 340	220 - 230	200 - 210	180 - 190
Density at 20 °C	g/cm³	12,2	14,9	15,6	17,0

Available forms:

Semi-finished products, standard parts, drawing parts, eroding electrodes, electrical contacts / voltage breakers, welding electrodes

Application areas:

Molds, electrical engineering, aviation, medical technology

SVS Schweißtechnik GmbH
Fritz-Thyssen-Straße 5
45475 Mülheim an der Ruhr
Germany

Telefon: +49 208 99328-0
Telefax: +49 208 99328-29
info@svs-schweisstechnik.de
www.svs-schweisstechnik.de