

Zirconium Copper

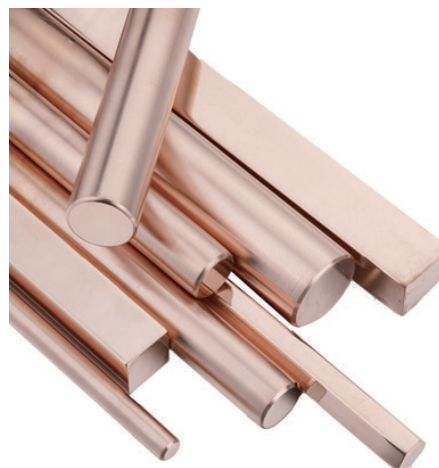
CZr0.15 (C15000)

Material Designation*

UNS	C15000
EN	CuZr (CW 120 C)
JIS	/
GB	TZr0.15

Chemical Composition

Cu	Balance	%
Zr	0.1-0.2	%
Others	≤0.1	%



Characteristics

It has high electrical conductivity, thermal conductivity and good process performances.

Typical Application

It is applied for spot welding electrode and electrode cap, especially suitable for coating sheet. It is also suitable for components of electronic devices.

Physical Properties

Density ^①	8.9	g/cm ³
Melting point	1080	°C
Electrical conductivity ^①	86	%IACS
Thermal conductivity ^①	367	W/(m·K)
Coefficient of thermal expansion ^②	17.0	10 ⁻⁶ / K
Modulus of elasticity	129	GPa

Note①: Temperature for testing is 20°C.

Note②: Temperature range for testing is 20-300°C.

Fabrication Properties

Cold workability	Excellent
Hot workability	Excellent
Brazing	Good
Resistance welding	Not recommended
Machinability compared with C36000	20%

Mechanical Properties

Diameter	Temper	Tensile Strength	Yield Strength	Elongation
mm		MPa min.	MPa min.	% min.
4 < Φ ≤ 25	R350	350	260	12
25 < Φ ≤ 50	R280	280	210	15

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Tolerance and Delivery Form

Diameter	Tolerance ^③	Ovality	Straight Bar		Coil wire	
			Length	Straightness	ID	Weight
mm	mm	mm	mm max.	mm/m max.	mm	kg
5 ≤ Φ ≤ 6	0.06	0.03	4000	1.0	500	100
6 < Φ ≤ 10	0.10	0.05	4000	1.0	500	500
10 < Φ ≤ 20	0.16	0.08	4000	1.0	800	500
20 < Φ ≤ 25	0.18	0.09	4000	1.0	1000	1000
25 < Φ ≤ 30	0.20	0.10	4000	1.0	--	--
30 < Φ ≤ 40	0.24	0.12	4000	1.0	--	--
40 < Φ ≤ 42.5	0.30	0.15	4000	1.0	--	--

Note^③: The tolerances listed in the table are specified as all plus or all minus. When tolerances are specified as plus and minus (±), half the values given.

Composition	BS EN 12163-2016
Conductivity	BS EN 12163-2016
Mechanical Properties	BS EN 12163-2016
Fabrication Properties	CDA
Other Physical Properties	CDA

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