

## High conductivity and high temperature resistant copper alloy C15100

### Standard

DIN: CuZr0.1  
 EN: CuZr0.1  
 UNS: C15100  
 JIS: C1510

### Applications

Automotive switches and relays, contacts, connectors, terminals, hybrid vehicles, electronic connectors, lead frames, switch blade pliers, power converters, power transformers, rectifier, circuit breakers, high voltage contacts.

### Chemical Composition (%)

Cu: Remainder  
 Zr: 0.05-0.15

### Physical Properties

Density (g/cm <sup>3</sup> )	8.94
Electrical conductivity IACS%(20°C)*	90
Modulus of elasticity (KN/mm <sup>2</sup> )	121
Coefficient of thermal expansion 10-6/K	17.6
Thermal conductivity W/(m*K)	360

\*value for the lowest temper class

### Merit

Compared to high purity copper alloys, the strength is increased during the conductivity remains almost unchanged. Besides that CuZr0.1 shows a better thermal resistance, better technological properties and better relaxation behaviour, compared to pure copper.

### Mechanical Properties

Temper	Tensile Strength		Yield Strength	Elongation	Hardness	Bending Test(90 °)	
	Mpa		Mpa	%	HV	GW	BW
R280 H01	280-310		min. 190	min. 13	80-100	0	0
R300 H02	300-360		min. 280	min. 6	95-115	0	0
R320 H03	320-390		min. 310	min. 5	100-125	-	-
R360 H04	360-430		min. 350	min. 4	120-145	-	-
R400 H06	400-450		min. 390	min. 3	125-150	-	-
R440 H08	440-490		min. 430	min. 2	min.135	-	-

Physical properties of the above materials are conventional performance indicators.If you have some special requirements,(for example property and tolerance).please contact Kinmachi Company directly, we will give you professional assessments and answers.