

Material Designation

GB	/
UNS	C17500
EN	CW104C/CuCo2Be
JIS	/

Chemical Composition

Copper, Cu	Rem.
Beryllium, Be	0.40 – 0.70%
Cobalt, Co	2.40 – 2.70%

Physical Properties

Density	8.79 g/cm ³
Electrical Conductivity	Min.40 %IACS
Thermal Conductivity	235 W/(m·K)
Coefficiency of Thermal Expansion	17.6 μm/(m·K)
Specific Heat Capacity	420 J/(kg·K)
Modulus of Elasticity	135 Gpa

Characteristics

CAMK17500 offers good strength and hardness characteristics coupled with conductivity in the range of 45-60 percent of copper with ultimate tensile and hardness properties approaching 140 ksi and RB 100 respectively. And it has a unique combination of relatively high electrical and thermal conductivity, and also available in wrought product forms, it is a heat treatable copper alloy with a high tensile strength.

It can be supplied fully hardened, and have good form. It is utilized when a combination of very good mechanical strength along with moderate electrical and thermal conductivity is required.

Application

CAMK17500 is primarily utilized in the industry applications that require most highly thermal or electrical conductivity.

1. Electrical Industry: Fuse Clips, Switch Parts, Relay parts, Connectors, Spring Connectors.
2. Fasteners: Washers, Fasteners.
3. Industrial: Springs, Seam Welding Dies, Resistance Welding Equipment, Resistance and Spot Welding Tips, Tooling for Plastic Moulds, Die-Casting Plunger Tips.

Mechanical Properties

Specification mm (up to)	Type	Temper	Tensile Strength Min. MPa	Yield Strength Min. MPa	Elongation Min. A%	Hardness Min.	Electrical Conductivity Min. % IACS
/	Strip	TF00	680	550	10	190 HV	45
		TH04	750	650	8	210 HV	48
/	Bar	TB00	240	70	20	20 HRB	20
		TD04	440	300	10	20 HRB	20
		TF00	690	550	10	92 HRB	45
		TH04	790	670	5	95 HRB	48
/	Wire	TB00	240	/	20	/	20
		TD04	450	/	2	/	20
		TF00	690	/	10	/	45
		TH04	750	/	10	/	48
/	Plate	TB00	240	/	20	20 HRB	20
		TD04	480	/	2	78 HRB	20
		TF00	680	/	8	92 HRB	46
		TH04	750	/	5	95 HRB	48

