C50715

TRIANGL EALLOY©

DATA SHEET

Fabricated Metal Products

Alloy Designation	
EN	CuSn2Fe0.1P
DIN	CuSn2Fe0.1P
UNS	C50715
JIS	KLF5**

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Characteristics

C50715 is a low-tin phosphor bronze alloy containing small amounts of iron, phosphorus, and tin. Strengthened by Fe–P precipitates within the copper matrix, it offers higher electrical conductivity than conventional phosphor bronzes. Suitable for hot rolling, C50715 combines excellent formability, conductivity, strength, and stress relaxation resistance, making it ideal for automotive applications operating at elevated temperatures. Its strength is comparable to that of 4% tin bronze.

Chemical Composition		
Sn	1.7-2.3	**%**
Fe	0.05-0.15	**%**
P	0.025-0.04	**%**
Cu	Remainder	

Main Applications

Electrical and electronic connectors
Automobile Connectors | Switch parts
The terminal member
Battery connector | Busbar

Physical Properties (Reference values at room temperature)

Density	g/cm3	8.9
Electrical conductivility	IACS%(20°C)*	32
Modulus of elasticity	KN/mm^2	122
Coefficient of thermal expansion	$10^{-6}/K$	17.6
Thermal conductivity	W/(m*K)	140

***value for the lowest temper class**

Mechanical Properties

TEMPER		Tensile Strength Mpa	Yield Strength Mpa	Elongation %	Hardness HV	Bending Test(90°) GW	Bending Test(90°) BW
H02	1/2H	390 - 540	min. 290	min. 8	140 - 180	0	0
H04	H	530 - 640	min. 440	min. 5	160 - 200	0	0.5
H06	EH	590 - 690	min. 550	-	min. 180	1	1.5

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