

Alloy Designation	
EN	CuSn0.15 / CW117C
DIN	CuSn0.15
UNS	C14415 ASTM B152
JIS	C1441

Chemical Composition		
Sn	0.1 - 0.15	%
Cu	Remainder	%

Characteristics
C14415 (CuSn0.15) is a micro-alloyed phosphor-bronze with ~0.15% Sn that gives solid-solution strengthening. The small tin addition raises mechanical stability and softening temperature while keeping very high electrical and thermal conductivity and excellent formability. It also offers good corrosion resistance and resistance to stress-corrosion cracking, with excellent weldability (arc, resistance and ultrasonic).

Main Applications
high-current connector tabs and central electric units in conventional and electric vehicles
Switches and Relays, Contacts, Terminals, Lead frames , male connectors and fuse boxes.

Physical Properties (Reference values at room temperature)		
Density	g/cm ³	8.93
Electrical conductivity	IACS%(20°C)*	82
Modulus of elasticity	KN/mm ²	123
Coefficient of thermal expansion	10 ⁻⁶ /K	18
Thermal conductivity	W/(m*K)	345

*value for the lowest temper class

Mechanical Properties							
TEMPER		Tensile Strength Mpa	Yield Strength Mpa	Elongation %	Hardness HV	Bending Test(90°) GW BW	
R250	O50	250 - 320	min. 200	min. 9	60 - 90	0	0
R300	H02	300 - 370	min. 250	min. 4	85 - 110	0	0
R360	H04	360 - 430	min. 300	min. 3	105 - 130	0	0
R420	H06	420 - 490	min. 350	min. 2	120 - 140	1	1

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