

Material Designation			Nominal Composition (mass content in %)		About The Alloy	
DIN-EN Symbol	CuSn0,15		Cu	Balance	Low-alloyed copper alloys are distinguished by a high electrical conductivity. They do not reach the spring force of the bronzes, however, in comparison with pure copper, they are significantly harder. Therefore, they are predominantly used for lead frames for semiconductors, as well as for cable connectors and for the central fuse, relay and terminal box of automobiles.	
DIN-EN	CW117C		Sn	0,12		
UNS	C14415		Fe	< 0,02		
JIS	C1441		Ni	< 0,02		
			Zn	< 0,1		
Physical Properties			Pb	< 0,005	BB01 is a copper alloy with a low Sn content for power semiconductors, which are used in the case of high heat development (e. g. TO 220). BB01 differs from SB02 (UNS C19400) by the higher thermal conductivity and the higher electrical conductivity. In comparison with pure copper BB01 has a higher strength while the electrical conductivity is a little lower. BB01 has excellent soldering and welding properties.	
			P	< 0,015		
Electrical conductivity soft	48	MS/m	Typical Applications			
Thermal conductivity	360	W/(m·K)				
Thermal expansion coefficient **	17	10-6/K				
Density	8,9	g/cm³				
Modulus of elasticity	128	GPa = kN/mm²				
* Reference values at room temperature ** Between 20 and 300 °C						

Mechanical Properties *)						
Temper condition		O R 250 H 60	H02 R 300 H 85	H04 R 360 H 105	H06 R 420 H 120	H08 R 460 H 135
Tensile strength in N/mm <sup>2</sup>		250 - 320	300 - 370	360 - 430	420 - 490	> 460
0.2 % yield Strength in N/mm <sup>2</sup>		200	250	320	400	410
Elongation A <sub>L50</sub> %		> 15	> 4	> 3	> 2	> 2
Vickers hardness HV		60 - 90	85 - 110	105 - 130	120 - 140	> 135
Electrical conductivity in % IACS		83	83	82	82	82
Minimum radius of the bending mandrel for 90° bend and strip thickness s, tempered quality						
0.10 ≤ s ≤ 0.25 mm	transverse	0 x s	0 x s	0 x s	1 x s	1.5 x s
	parallel	0 x s	0 x s	0 x s	1 x s	1.5 x s
0.25 < s ≤ 0.5 mm	transverse	0 x s	0 x s	0.5 x s	1 x s	-
	parallel	0 x s	0 x s	0.5 x s	1.5 x s	-
*) Reference values						

The information given in this material data sheet, which in any case provides no guarantee of particular characteristics, has been compiled to the best of our knowledge but is given without any obligation on our part. Our liability is determined solely by the individual contract terms, in particular by our general conditions of sale. We reserve the right to make alterations especially where necessitated by technical developments or changes in availability. Please ask for the latest edition of this material data sheet.

## Processing Instructions

Cold forming properties	very good
Machinability	sufficient
Electroplating properties	very good
Hot-dip tinning properties	very good
Soldering	very good
Resistance welding	good
Gas shielded arc welding	good
Laser welding	good

## Available Versions

Coils with standard outer diameters of 1200 mm
Strips in reel form with coil weight of up to 1500 kg
Multipancake up to 2.5 t
Hot-dip tinned strips
Profiled strips
Electroplated strips (tin, nickel)

## Available Dimensions

Bright pre-rolled strips 1 to 2.5 mm
Precision strip thickness from 0.05 to 1.2 mm
Strip width from 3.0 to 600 mm, but at least 10 times of the strip thickness
Other widths available on request

## Your Local Contact Person

Europe

Asia



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