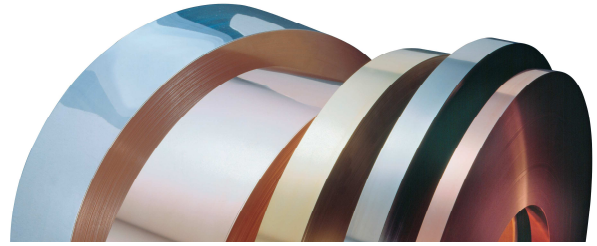


Bronze (Copper-Tin) BB80

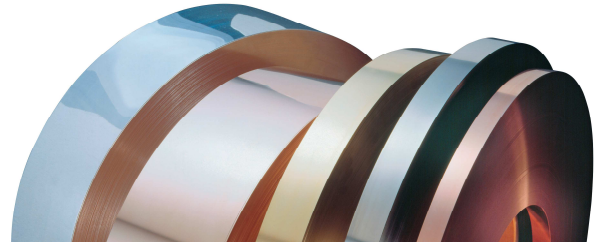


Material Designation			Nominal Composition (mass content in %)		About The Alloy
DIN-EN Symbol	CuSn8		Cu	Balance	
DIN-EN	CW453K		Sn	8	
UNS	C52100		Zn	< 0.2	
JIS	C5212		Ni	< 0.2	
Physical Properties			Fe	< 0.1	
			Pb	< 0.005	
Electrical conductivity soft	7.5	MS/m	P	0.03 - 0.35	
Thermal conductivity	54	W/(m·K)	Other	< 0.1	
Thermal expansion coefficient **	18	10 ⁻⁶ /K	Typical Applications		
Density	8.8	g/cm ³	<ul style="list-style-type: none"> • Connectors for electrical engineering, electronics and automotive technology • Stamped-bent parts • Contact springs • Leaf springs for relays • Slide bearings • Slide bars 		
Modulus of elasticity	115	GPa = kN/mm ²			
* Reference values at room temperature					
** Between 20 and 300 °C					

Mechanical Properties *)							
Temper condition		O R 370 H 90	H02 R 450 H 140	H03 R 540 H 170	H04 R 600 H 190	H06 R 660 H 210	H08 R 735 H 230
Tensile strength in N/mm ²		370 - 450	450 - 550	540 - 630	600 - 690	660 - 750	735 - 830
0.2 % yield Strength in N/mm ²		< 300	380	470	540	620	700
Elongation A _{LS0} %		> 50	> 22	> 15	> 8	> 6	> 2
Vickers hardness HV		90 - 120	140 - 175	170 - 200	190 - 220	210 - 240	230 - 260
Electrical conductivity in % IACS		13	12	12	12	12	12
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	0 x s	0.5 x s	1 x s
	parallel	0 x s	0 x s	0 x s	1 x s	1.5 x s	4 x s
0.25 < s ≤ 1.0 mm	transverse	0 x s	0 x s	0 x s	1 x s	1 x s	-
	parallel	0 x s	0 x s	0.5 x s	2 x s	3 x s	-

*) Reference values

Bronze (Copper-Tin) BB80



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	very good

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.

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)

Your Local Contact Person	
Europe	Asia
<p>SUNDWIGER Messingwerk</p> <p>Sundwiger Messingwerk GmbH</p> <p>Hönnetalstraße 110 58675 Hemer Deutschland Tel. +49 2372 661-100 Fax +49 2372 661-48100 E-Mail: sales-sundwig@sundwiger-mw.com www.sundwiger-mw.com</p>	<p>SUNDWIGER Messingwerk</p> <p>Diehl Metall (Shenzhen) Co. Ltd.</p> <p>5F, Block 25, Shatoujiao Free Trade Zone 518081 Shenzhen P.R. of China Tel. +86 755 2235 7466 Fax +86 755 25260974 E-Mail: sales@sundwiger-mw.com.cn www.sundwiger-mw.com</p>

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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.