

Phosphor Bronze (Copper-Tin) BF03



Material Designation	
Sundwiger	BF03
DIN-EN Symbol	(CuSn0,3)
DIN-EN	CW129C
UNS	C18835

Physical Properties*		
Electrical conductivity	≥42,9 ≥74	MS/m % IACS
Thermal conductivity	290	W/(m·K)
Thermal expansion coefficient**	17	10 ⁻⁶ /K
Density	8.9	g/cm ³
Modulus of elasticity	125	GPa = kN/mm ²
* Reference values at room temperature		
** Between 20 and 300 °C		

Typical Applications	
<ul style="list-style-type: none"> • Conductor and connector wire • Pins • Wire harnesses 	

Nominal Composition (mass content in %)	
Cu	Balance
Sn	0,3 %
Zn	≤ 0,01 %
Ni	≤ 0,01 %
Fe	≤ 0,01 %
P	≤ 0,01 %
Pb	≤ 0,005 %
Others	≤ 0,1 %

Mechanical Properties*	
Tensile strength in N/mm ² , soft	270 - 320
Elongation A100 in %, soft	> 30
Tensile strength in N/mm ² , hard	≥ 520
* Reference values	

About the Alloy	
Low-alloyed copper alloys exhibit a high electrical conductivity. Due to small additions of Sn the cold-forming and softening properties are improved.	
BF03 has superior softening resistance compared to ETP-Cu and offers a good cold forming performance and fine wire drawability.	
Its balanced composition and its physical properties make BF03 to an excellent electronic alloy particularly in applications for wiring harnesses.	
BF03 does not contain any cadmium. As many other copper alloys produced by Sundwiger Messingwerk, BF03 is one of the „green materials“ and can be recycled easily.	

Available Dimensions		
Round wire	1,2 - 2 mm in coils	max. 100 kg
	0,5 - 2 mm on reels	max. 1000 kg
	1,5 - 3 mm on acropaks	max. 400 kg
	on request: in drums	max. 400 kg

Your Contact Person	
Worldwide	
Sundwiger Messingwerk GmbH Hönnetalstraße 110 58675 Hemer Deutschland Tel. +49 2372 661-0 Fax +49 2372 661-259 E-Mail: sales-sundwig@sundwiger-mw.com www.sundwiger-mw.com	

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.