

Phosphor Bronze (Copper-Tin) BF03



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

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 %

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.

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

Mechanical Properties*	
Tensile strength soft N/mm ²	270 - 320
Elongation soft A100 in %	> 30
Tensile strength hard N/mm ²	≥ 620

* Reference values

BF03 does not contain any cadmium. As many other copper alloys produced by Diehl Metal Applications, 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

- Typical Applications**
- Conductor and connector wire
 - Pins
 - Wire harnesses

Your Contact Person	
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DMA_Wire_BF03_V1_M-5M

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