

Phosphor Bronze (Copper-Tin) BD20 | BD40 | BD50 | BD60 | BD80



Material Designation						Reference to Standards		Typical Applications
Sundwiger	BD20	BD40	BD50	BD60	BD80	DIN	EN 12166	
DIN-EN Symbol	CuSn2	CuSn4	CuSn5	CuSn6	CuSn8	About the Alloy		
DIN-EN	-	CW450K	CW451K	CW452K	CW453K	Low-alloyed phosphor bronze alloys show high tensile strength and corrosion resistance.		
UNS	C50700	C51100	C51000	C51900	C52100			
JIS	-	C5111	C5102	C5191	C5212			

- Spring wire
- Connectors
- Flat wire
- Special screws and rivets
- Pressed parts
- Wire mesh
- Reinforcement (construction)
- Spectacle frames

Mechanical Properties*					
Sundwiger	BD20	BD40	BD50	BD60	BD80
Tensile strength in N/mm ²					
soft	280 - 360	330 - 420	330 - 420	360 - 440	400 - 490
1/4 hard	360 - 430	410 - 510	410 - 510	430 - 530	490 - 590
1/2 hard	430 - 500	500 - 600	500 - 600	530 - 630	590 - 690
3/4 hard	490 - 560	590 - 690	590 - 690	630 - 740	690 - 790
hard	560 - 630	690 - 850	690 - 850	740 - 900	790 - 900
spring hard	630 - 730	min 850	min 850	min 900	min 900
Elongation A100 in %, soft					
> 35					
* Reference values					

Physical Properties*					
Sundwiger	BD20	BD40	BD50	BD60	BD80
Electrical conductivity in % IACS (hard condition)	≥43	≥20	≥17	≥14	≥12
Electrical conductivity in MS/m	≥24.9	≥11.6	≥9.8	≥8.1	≥6.9
Density in g/cm ³	8.9	8.9	8.9	8.8	8.8
* Reference values					

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Available Dimensions		
Rolled, modified square wire	5.1 mm 7.4 mm	max. 2000 kg
Round wire	1.2 - 6.2 mm in coils	max. 200 kg
	1.8 - 6.2 mm on stands	max. 1500 kg
	0.5 - 3 mm on reels	max. 1000 kg
	1.5 - 3 mm on acropaks	max. 400 kg
	On request: in drums	max. 400 kg

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