

**Nickel Silver**

CuNi12Zn24

CuNi18Zn20

Material - No.	DIN / EN	CW403J	CW409J
	UNS	G10060	C76400
Nominal Composition	[%]	12 Ni 24 Zn Rest Cu	18 Ni 20 Zn Rest Cu
Conductivity <sup>2</sup>	[m/(Ohm mm <sup>2</sup> )]	4,1	2,9
Conductivity <sup>2</sup>	[% IACS]	7	5
Thermal Conductivity <sup>2</sup>	[W/(mK)]	42	33
Coefficient of Thermal Expansion <sup>3</sup>	[10 <sup>-6</sup> /K]	16	16
Tensile Strength annealed	[N/mm <sup>2</sup> ]	460	490
Elongation annealed	[%]	30	30
Tensile Strength hard	[N/mm <sup>2</sup> ]	740	780
Density	[g/cm <sup>3</sup> ]	8,7	8,8

1) Nominal data for diameter 0,8 mm

2) At 20° C

3) Temperature range 20 - 200° C

		<b>Bronze</b>			
		CuSn0,6	CuSn5	CuSn6	CuSn8
<b>Material - No.</b>	DIN / EN	-	CW451K	CW452K	CW453K
	UNS	C50100	C51000	C51900	C52100
<b>Nominal Composition</b>	[%]	0,6 Sn Rest Cu	5 Sn Rest Cu	6 Sn Rest Cu	8 Sn Rest Cu
<b>Conductivity</b> <sup>2</sup>	[m/(Ohm mm <sup>2</sup> )]	37	9,9	8,1	7,0
<b>Conductivity</b> <sup>2</sup>	[% IACS]	63	17	14	12
<b>Thermal Conductivity</b> <sup>2</sup>	[W/(mK)]	220	96	75	67
<b>Coefficient of Thermal Expansion</b> <sup>3</sup>	[10 <sup>-6</sup> /K]	17	17	18	18
<b>Tensile Strength</b> annealed	[N/mm <sup>2</sup> ]	290	400	420	470
<b>Elongation</b> annealed	[%]	30	40	55	70
<b>Tensile Strength</b> hard	[N/mm <sup>2</sup> ]	460	820	870	900
<b>Density</b>	[g/cm <sup>3</sup> ]	8,9	8,9	8,8	8,8

1) Nominal data for diameter 0,8 mm

2) At 20° C

3) Temperature range 20 - 200° C

**Messing**

		CuZn15	CuZn20	CuZn30	CuZn37
<b>Material - No.</b>	DIN / EN	CW502L	CW503L	CW505L	CW508L
	UNS	C23000	C24000	C26000	C27400
<b>Nominal Composition</b>	[%]	15 Zn Rest Cu	20 Zn Rest Cu	30 Zn Rest Cu	37 Zn Rest Cu
<b>Conductivity</b> <sup>2</sup>	[m/(Ohm mm <sup>2</sup> )]	21,5	18,8	16	15,1
<b>Conductivity</b> <sup>2</sup>	[% IACS]	37	32	28	26
<b>Thermal Conductivity</b> <sup>2</sup>	[W/(mK)]	160	140	125	120
<b>Coefficient of Thermal Expansion</b> <sup>3</sup>	[10 <sup>-6</sup> /K]	18	18	20	20
<b>Tensile Strength</b> annealed	[N/mm <sup>2</sup> ]	350	350	380	380
<b>Elongation</b> annealed	[%]	30	30	30	30
<b>Tensile Strength</b> hard	[N/mm <sup>2</sup> ]	600	600	720	720
<b>Density</b>	[g/cm <sup>3</sup> ]	8,8	8,7	8,6	8,5

1) Nominal data for diameter 0,8 mm

2) At 20° C

3) Temperature range 20 - 200° C