

Brass

CuZn10 / CW501 / C22000/ CZ101

Version 5

Reference standard: EN 12166

Symbol	Number	Element	Cu	Al	Fe	Ni	Pb	Sn	Zn	Bal.	Density g/cm ³
CuZn10	CW501	Min %	89.0	-	-	-	-	-	rem		8.8
		Max %	91.0	0.02	0.05	0.3	0.05	0.1	-	0.1	

Brass wire is a copper zinc alloy and is available in a range of alloys from 90% copper / 10% zinc to 63% copper / 37% zinc. The higher the percentage of zinc in the alloy the greater the cold working strength, whilst the higher the copper content the greater the ductility. Brass wire is manufactured in flat, round and square section in a full range of sizes and tempers to meet customer requirements.

Typical Tensile Strength N/mm ²				
Size Range	Soft	¼ Hard	½ Hard	Hard
0.1-0.5mm	290-390	-	-	-
0.5-1.5mm	280-380	380-480	470-570	570min
1.5-4.0mm	270-370	350-450	440-540	530min
4.0-8.0mm	-		410-510	-
4.0-20.0mm	240-340	330-430-	-	-

Physical Properties:

- Resistivity: 0.039 ($\Omega \times \text{mm}^2/\text{m}$)
- Temperature coefficient of resistance at 20-100°C (1/K): 0.003
- Elongation at soft temper: >30%

Tolerances:

<0.25mm	±0.005mm
0.25-0.50mm	±0.008mm
0.50-1.00mm	±0.012mm
1.00-2.00mm	±0.02mm
2.00-4.00mm	±0.03mm

Typical applications:

- Jewellery and ornamental trims
- Components for the electrical industry
- Industrial fasteners
- Coinage, medals
- Resistance wire



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