



## EMH-Brass Tubes in CuZn10

**CuZn10** has excellent cold working properties due to its very high copper content.

This alloy is particularly suitable for stamping, riveting, crimping, flanging, cold extrusion or other cold working operations.

### Chemical Composition \*

Cu	90 %
Zn	balance

\* Standard values in % by weight

### Material Description

EN	CuZn10, CW501L
UNS	C22000
DIN*	CuZn10, 2.0230
BS*	CZ101
NF*	CuZn10

\* former national standards

### Physical Properties \*

#### Electrical conductivity

MS/m	24.7
% IACS	42

#### Thermal conductivity

W/(m*K)	184
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#### Thermal expansion coefficient

(0 – 300 °C) 10 <sup>-6</sup> /K	18.2
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#### Density

g/cm <sup>3</sup>	8.8
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#### Modulus of elasticity

GPa	124
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\* Standard values at room temperature  
1 GPa = 1 kN/mm<sup>2</sup>  
1 MS/m = 1 m/Ω · mm

### Processing Properties

#### Forming

Machinability (CuZn39Pb3 = 100%)	20 %
Cold forming	excellent
Hot forming	fair

#### Joining

Resistance welding	good
Inert gas shielded arc welding	good
Hard soldering	excellent
Soft soldering	excellent

#### Surface Treatment

##### Polishing

mechanical	excellent
electrolytical	excellent

##### Electroplating

	excellent
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### Heat Treatment

Melting point	1,025 – 1,045 °C
Hot forming	750 – 900 °C
Soft annealing	450 – 600 °C, 1-3 h
Thermal stress-relieving	200 – 300 °C, 1-3 h

### Corrosion Resistance

Brasses with a high copper content are generally resistant to organic substances and neutral or alkaline compounds. They are virtually unsusceptible to stress corrosion cracking.

### Mechanical Properties (attainable values, depending on the dimension and form)

Standard values	from (soft)	to (hard)
R <sub>m</sub> [MPa]	230	460
R <sub>p 0.2</sub> [MPa]	60	420
A <sub>5</sub> [%]	60	15
HB	75	130

