

# CuZn28

## CuZn28

CuZn28 offers excellent cold workability and good strength properties. It possesses good hot workability and excellent soldering characteristics. Its most distinctive feature is its suitability for deep drawing processes.

### Comparable Standards

EN	JIS
CW504L	C2460

### Chemical Composition %

Cu	Zn	Ni	Sn	Fe
71-73	rem	0.03 max	0.1 max	0.05 max

### Physical Properties

Melting Point	910-965	[°C]
Density	8.55	(g/cm <sup>3</sup> )
Cp @ 20°C	0.377	[kJ/kgK]
Thermal Conductivity	121	(W/mK)
Electrical Conductivity	≥27,6	%IACS
Modules of Elasticity	115	[GPa]
α @ 20°C	20	[10 <sup>-6</sup> /K]

Note: The specified conductivity applies to the soft condition only.

Cp specific heat

α thermal expansion coefficient

### Fabrication Properties

Machinability	less suitable
Soft Soldering	excellent
Gas shield arc welding	fair
Laser Welding	less suitable
Cold Formability	excellent
Hot Formability	good
Resistance welding	good
Hot-dip tinned properties	excellent
Electroplating Feature	excellent

### Electrical Conductivity

Electrical conductivity is strongly influenced by chemical composition. High levels of cold deformation and small grain size moderately reduce electrical conductivity. The minimum conductivity level can be determined.

#### Typical Uses

Architecture, connectors, decorative panels, souvenir manufacturing, coins, terminal connectors, rivets, sound insulation equipment, case cups, faucets.

#### Corrosion Resistance

CuZn28 exhibits good resistance to water, steam, various saline solutions, and many organic liquids. However, cold-formed CuZn28 under internal or external stress may corrode in environments containing aqueous ammonia, ammonium salts, or amines. The risk of stress corrosion can be reduced by applying heat treatment to semi-finished or finished products. It is not resistant to acids and aqueous sulfur compounds.

## Mechanical Properties

	Tensile Strength [MPa]	Yield Strangth [MPa]	Elongation A50 [%]	Hardness HV [-]
R270	270-350	≤ 160	≥ 40	55-90
R350	350-450	≥ 170	≥ 21	95-140
R450	410-550	≥ 340	≥ 9	130-175
R490	490	≥ 540	-	≥160

Other tempers are available upon request.

$r = x * t$  (thickness  $t \leq 0,5\text{mm}$ )

GW bend axis transverse to rolling direction. BW bend axis parallel to rolling direction.

## Dimensional Specifications

Thickness (mm)	Width (mm)
0.04-0.20	10-380
0.21-1.00	5-380
1.01-4.00	15-400
4.01-8.00	25-400