

# CuAg0,1P

## CW016A

### Alloy Designation

EN	Cu-AG0.1P
DIN CEN/TS 13388	CW016A
UNS	C10700 *

\* difference in chemical composition

### Characteristics

**CuAg0.10P** is a phosphorus-deoxidized copper with a limited, low amount of residual phosphorus. The silver content improves softening resistance a lot by maintaining high conductivity and allows applications at elevated temperatures.

**CuAg0.10P** from KME has an excellent electrical conductivity and excellent welding and soldering properties. It can be formed excellent, either hot or cold.

### Main Applications

**Electrical:** Commutator Segments, Terminal Connectors, Busbars, Conductivity Wire, Contacts, Windings, Switches, Transistor Bases, Conductors, Radio Parts, Printed Circuit Foil, Coaxial Cable.

**Industrial:** Chemical Process Equipment, Printing Rolls, Clad Metals, Heat Exchangers, Applications Requiring Brazing in Hydrogen Atmosphere.

### Chemical Composition (Balance)

Weight percentage

Cu	Rest	%
Ag	0.1	%
P	≈ 0.003	%

### Mechanical Properties (EN 1652)

Temper	Tensile Strength	Yield Strength Minimum	Elongation Minimum	Hardness	Bending 90°	
	Rm	Rp <sub>0.2</sub>	A <sub>50mm</sub>	HV *	gw rel. Bending Radius R/T	bw
	MPa	MPa	%	HV	Strip Thickness ≤ 0.50mm	
R220	220 .. 260	≤ 140 *	33	40 .. 65	0	0
R240	240 .. 300	180	8	65 .. 95	0	0
R290	290 .. 360	250	4	90 .. 110	0	0
R360	≥ 360	320	2	≥ 110	0	0.5

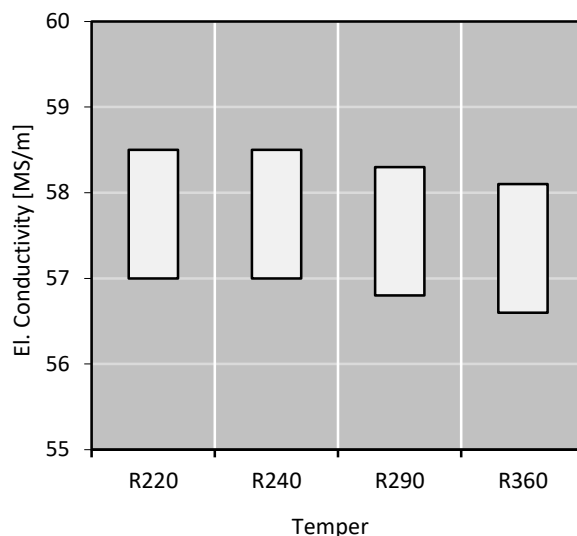
\* only for information

### Physical Properties

Typical values in annealed temper at 20 °C

Density		8.94	g/cm <sup>3</sup>
Thermal expansion coefficient	20 .. 300 °C	17.3	10 <sup>-6</sup> /K
Specific heat capacity		0.386	J/(g·K)
Thermal conductivity		375	W/(m·K)
Electrical conductivity	MS/m	56	MS/m
Electrical conductivity	IACS	96	%
Thermal coefficient of electrical resistance	(0 .. 100 °C)	3.7	10 <sup>-3</sup> /K
Modulus of elasticity	GPa	130	GPa

### Elektrische Leitfähigkeit



#### Fabrication Properties \*

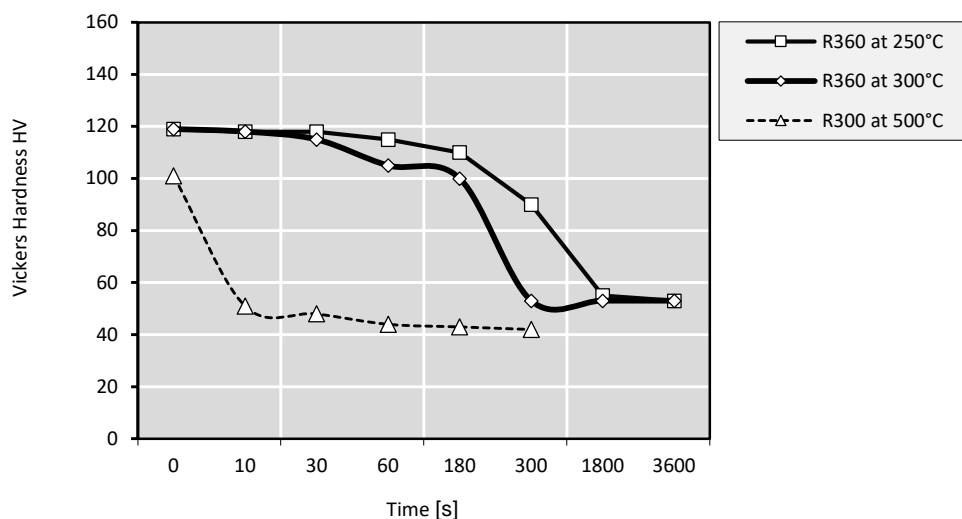
Cold Forming Properties	Excellent
Machinability (Rating 20)	Less suitable
Electroplating Properties	Excellent
Hot Tinning Properties	Excellent
Soft Soldering, Brazing	Excellent
Resistance Welding	Less suitable
Gas Shielded Arc Welding	Good
Laser Welding	Less suitable

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#### Corrosion Resistance \*

Practically resistant against stress corrosion cracking.

#### Softening Resistance



After short time heat treatment Vickers Hardness is measured. The diagram shows typical values.

#### Bend Fatigue (at room temperature)

The fatigue strength gives an indication about the resistance to variations in applied tension. It is measured under symmetrical alternating load. The maximum bending load for  $10^7$  load cycles without crack is measured. Dependent on the temper class it is approximately 1/3 of the tensile strength  $R_m$ .

#### Available delivery forms \*

Strips in coils

Traverse-wound coils with drum weights up to 1.5 t

TECSTRIP®\_multicoil up to 2.5 t

Hot-Dip-Tinned strips in thickness range 0.10 up to 1.20 mm

\* For more details call our sales service

Due to continued improvements within our production process, the details stated in our brochure can not be guaranteed. We reserve the right to update or amend our products, without prior notification. We suggest that you obtain confirmation of our product details / specifications prior to committing to specific alloys.