

## CuAg Alloys

### Oxygen-free, silver-alloyed coppers

- CuAg0,04 (OF)
- CuAg0,045 (OF)
- CuAg0,05 (OF)
- CuAg0,10 (OF)

### Properties

- High electrical conductivity
- High thermal conductivity
- Excellent formability
- Good weldability
- Excellent machinability
- Excellent corrosion resistance
- Resists hydrogen embrittlement

### Composition

- Cu + Ag min 99,98 %
- Oxygen-free (O<sub>2</sub> max 10 ppm), high conductivity copper

### Electrical conductivity

- min 100 % IACS

### Typical applications

Engraving industry / graphic plates, commutators



	<b>CuAg0,04 (OF)</b>	<b>CuAg0,045 (OF)</b>	<b>CuAg0,05 (OF)</b>	<b>CuAg0,10 (OF)</b>
European standard number	CW017A	CW017A		CW019A
UNS code	C10400	C10500		C10700
Manufacturing location	Pori	Pori	Pori	Pori
Chemical properties	0 max 10 ppm Ag 0.03-0.05 %	0 max 10 ppm Ag 0.035-0.05 %	0 max 10 ppm Ag 0.04-0.06 %	0 max 10 ppm Ag 0.085-0.12 %

**Physical Properties**

Density	
g/cm <sup>3</sup>	8.9
lb/in <sup>3</sup>	0.323
Electrical Conductivity****	
(Nominal value in black)	min 100
%IACS	min 100
Thermal Conductivity	
W/(m °K)	min 388
Btu/ft h °F	min 224
Modulus of Elasticity	
GPa	117
X1000 ksi	17
Coef. of Thermal Exp.	
at 20 °C (68 °F)	
10 <sup>-6</sup> /°C	17.6
10 <sup>-6</sup> /°F	9.8

**Tempers**

**Mechanical Properties**

EN H040 / R200		
Tensile Strength Rm N/mm <sup>2</sup>		200 - 250
Yield Strength (0.2 %) N/mm <sup>2</sup>	max	100
Elongation % A50 / A	min	- / 42
Hardness (HV)		40 - 65
Thickness mm (Pori)		0.2 - 20
EN H040 / R220		
Tensile Strength Rm N/mm <sup>2</sup>		220 - 260
Yield Strength (0.2 %) N/mm <sup>2</sup>	max	140
Elongation % A50 / A	min	33 / 42
Hardness (HV)		40 - 65
Thickness mm (Pori)		0.2 - 20
EN H065 / R240		
Tensile Strength Rm N/mm <sup>2</sup>		240 - 300
Yield Strength (0.2 %) N/mm <sup>2</sup>	min	180
Elongation % A50 / A	min	8 / 15
Hardness (HV)		65 - 95
Thickness mm (Pori)		0.2 - 6, 12 - 25
EN H090 / R290		
Tensile Strength Rm N/mm <sup>2</sup>		290 - 360
Yield Strength (0.2 %) N/mm <sup>2</sup>	min	250
Elongation % A50 / A	min	4 / 6
Hardness (HV)		90 - 110
Thickness mm (Pori)		0.2 - 25
EN H110 / R360		
Tensile Strength Rm N/mm <sup>2</sup>	min	360
Yield Strength (0.2 %) N/mm <sup>2</sup>	min	320
Elongation % A50 / A	min	2 /
Hardness (HV)	min	110
Thickness mm (Pori)		0.2 - 20

Data for information only and not for use as purchase specification.  
 Other tempers - as ASTM - are available upon request.  
 Yield strength, Elongation and Hardness are typical values for each temper.  
 Elongation: The first value is for thickness up to and incl. 0.25 mm / next is > 0.25 mm  
 \*) Pori: Electrical conductivity according to EN 13599  
 Pori: Thicknesses up to 100 mm available in hot roller temper. For strips in coils max. thickness 4 mm. Material thicknesses for building purposes typically 0.5 -2 mm.