

## CuAg Alloys

Oxygen Free Silver Alloyed Coppers: CuAg0,04 (OF), CuAg0,045 (OF), CuAg0,05 (OF) and CuAg0,10 (OF) are produced in Luvata Pori.

### **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>Alloy names</b>	<b>CuAg0,04 (PF)</b>	<b>CuAg0,045 (PF)</b>	<b>CuAg0,05 (PF)</b>	<b>CuAg0,10 (PF)</b>
European standard number	CW017A	CW017A		CW019A
UNS code	C10400	C10500		C10700
Manufacturing location	Pori	Pori	Pori	Pori

<b>Chemical properties</b>	O max 10 ppm Ag 0.03-0.05 %	O max 10 ppm Ag 0.035-0.05 %	O max 10 ppm Ag 0.04-0.06 %	O max 10 ppm Ag 0.085-0.12 %
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### 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

<b>EN H040 / R200</b>				
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
<b>EN H040 / R220</b>				
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
<b>EN H065 / R240</b>				
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
<b>EN H090 / R290</b>				
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
<b>EN H110 / R360</b>				
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

Other tempers are available upon request  
Data for information only not for purchase specification  
Yield strength, Elongation and Hardness are typical values for each temper