



Material Designation	
EN	Cu-OF
UNS	C10100
EUR	CW008A

Chemical Composition		
Cu	(wt.%)	≥ 99.95
P	(wt.%)	≈ 0.003

Typical Application
<ul style="list-style-type: none"> - Cable strip - Components for the electrical Industry - Heat sinks

Physical Properties		
Electrical Conductivity *	58.0 100	MS/m % IACS
Thermal Conductivity	390	W/(m-K)
Thermal Expansion	17,7	10 ⁻⁶ /K
Density	8,94	g/cm ³
Elastic Modulus	127	GPa
* In Soft Condition		

Fabrication Properties	
Machining	Poor
Cold Working	Excellent
Electroplating	Excellent
Soft Soldering	Excellent
Hot-Dip Tinning	Excellent
Resistance Welding	Fair
Gas Shield Arc Welding	Good

Corrosion Resistance
Good resistance to <ul style="list-style-type: none"> - Pure water vapour - Industrial drinking water - Non-oxidizing acids - Alkalis (except for ammonia and Cyanide-containing compounds) - Industrial atmospheres - Neutral saline solutions
Not resistant to <ul style="list-style-type: none"> - Oxidizing acids - Hydrous Ammonia - Hydrogen sulphide - Seawater. Especially with high flow rates

Mechanical Properties					
Temper		R220	R240	R290	R360
Tensile Strength R _m	MPa	220 – 260	240 – 300	290 – 360	≥ 360
Yield Strength R _{p0.2}	MPa	≤ 140	≥ 180	≥ 250	≥ 320
Elongation A _{50 mm}	%	≥ 33	≥ 8	≥ 4	≥ 2
Hardness	HV	40 – 65	65 – 95	90 – 110	≥ 110
Bendability 90°					
Relative Bending Radius r/t **	Good Way / Bad Way	0 / 0	0 / 0	0 / 0	0 / 0
** Strip Thickness t ≤ 0.5 mm					

Special Characteristics
Oxygen free high conductivity copper or C103 is used when conductivity as well as brazing and welding operations are needed under reducing conditions. For these applications in tough environments the alloy needs to be as pure as possible as this ensures 100% conductivity of the material.

Amari Copper Alloys Ltd
 Unit 47 & 48 Manorside Ind Estate, North Moons Moat, Eagle Road, Redditch, B98 9HE
 Tel: +44 (0) 1527 405600 / Fax: +44 (0) 1527 405605
sales@amaricopperalloys.com / www.amaricopperalloys.com