



COPPER STRIP FOR ELECTRICAL PURPOSES TO EN 13599:2002

Table 1: Chemical Composition

Material Designation		Composition in %									
Symbol	Number	Element	Cu	Ag	Bi	O	P	Pb	Other Elements (see note)		
									Total	excluding	
Cu-ETP	CW004A	Min. Max.	99,99 ^a -	- -	- 0,0005	- 0,040 ^b	- -	- 0,005	- 0,005	- 0,03	Ag, O
Cu-OF	CW008A	Min. Max.	99,95 ^a -	- -	- 0,0005	- - ^c	- -	- 0,005	- 0,005	- 0,03	Ag

NOTE: The total of other elements (than copper) is defined as the sum of Ag, As, Bi, Cd, Co, Cr, Fe, Mn, Ni, O, P, Pb, S, Sb, Se, Si, Sn, Te and Zn, subject to the exclusion of any individual elements indicated.

^a Including silver, up to a maximum of 0,015%
^b Oxygen content up to 0,060% is permitted, subject to agreement between the purchaser and the supplier.
^c The oxygen content shall be such that the material conforms to the hydrogen embrittlement requirements of EN 1976.

Table 2: Mechanical Values

Designations		Nominal Thickness t		Hardness		Tensile Strength R _m		0,2% Proof Strength R _{p0,2}		Elongation		
Symbol	Number	Material Condition	mm		HV		MPa		MPa		A _{50 mm} for Thicknesses From 0,1mm up to and Including 2,5mm	A for Thicknesses Over 2,5mm
			From	Up to & Including	Min	Max	Min	Max	Min	Max	%	%
Cu-ETP ^b Cu-OF	CW004A ^b CW008A	H040	0,10	5	40	65	-	-	-	-	-	-
		R220			-	-	220	260	-	(140)	33	42
		H040	0,20	10	40	65	-	-	-	-	-	-
		R220			-	-	200	250	-	(100)	-	42
		H065	0,10	10	65	95	-	-	-	-	-	-
		R240			-	-	240	300	180	-	8	15
		H090	0,10	10	90	110	-	-	-	-	-	-
		R290			-	-	290	360	250	-	4	6
		H110	0,10	2	110	-	-	-	-	-	-	-
R360	-	-			360	-	320	-	2	-		