

Cold rolled strip COPPER – BRASS - BRONZE

AVAILABLE STOCK

FTS/ANGL/QUAL/ February2016

BS	Copper				Brass				Bronze		
	C101	C106	-	C110	CZ102	-	CZ107	CZ108	-	PB103	PB104
EN 1652	Cu-ETP CW004A	Cu-DHP CW024A	Cu-DLP CW023A	Cu-Of CW008A	CuZn15 CW502L	CuZn33 CW506L	CuZn36 CW507L	CuZn37 CW508L	CuSn3Zn9 CW454K	CuSn6 CW452K	CuSn8 CW453K
Electrical conductivity (IACS)	1.7241 (100)	2.2 (70 à 90)	1.9 (85 à 98)	1.7241 (100)	4.7 (37)	6.2 (28)	6.2 (28)	6.2 (28)	9 (20)	13 (13)	14.5 (12)
Conditions	Annealed – temper rolled				Annealed – temper rolled				Annealed – temper rolled		
Available thickness	0.2 to 3.0 mm	0.3 to 1.5 mm		On request	0.2 to 3.0 mm				0.2 to 2.0 mm		

Maximum of electrical conductivity at 20°C in soft annealed condition (µ/cm) according to AFNOR NFA 51-100/51-101/51-108 – IACS : electrical conductivity in %

COPPER – EN 1652

Grade		Chemical composition in %						Mechanical properties ⁽¹⁾				
BS	EN 1652	Cu ⁽²⁾	Bi	O	P	Pb	Others	EN 1652	Tensile strength N/mm ²	Yield strength 0.2 N/mm ²	Elongation A50 % ⁽³⁾	Hardness HV
C101	Cu-ETP	99.90 min	0.0005 maxi	0.040 max	-	0.005 max	0.03 max	R220	220 to 260	140 max	33 min	40 to 65
C106	Cu-DHP	99.90 min	-	-	0.015 to 0.040	-	-	R240	240 to 300	180 min	8 min	65 to 95
-	Cu-DLP	99.90 min	0.0005 max	-	0.005 to 0.013	0.005 max	0.03 max	R290	290 to 360	250 min	4 min	90 to 110
C110	Cu-Of	99.95 min	0.0005 max	-	-	0.005 max	0.03 max	R360	360 min	320 min	2 min	110 min

⁽¹⁾ All values in light-faced letter for information only. ⁽²⁾ Including Ag, up to a maximum of 0.015% - ⁽³⁾ For thicknesses up to and including 2.5 mm

BRASS – EN 1652

Grade		CONDITION	Mechanical properties ⁽¹⁾					Chemical composition in %			
BS	EN 1652	EN 1652	Tensile strength N/mm ²	Yield strength 0.2 N/mm ²	Elongation A50 % ⁽³⁾	Hardness HV	Grain size µm	Cu	Al	Fe	Ni
CZ102	CuZn15	R260	260 to 310	170 max	36 min	55 to 85	G020 ⁽⁵⁾	84.0 to 86.0	0.02 max	0.05 max	0.3 max
		R300	300 to 370	150 min	16 min	85 to 115	-	Pb	Sn	Zn	others
		R350	350 to 420	250 min	4 min	105 to 135	-	0.05 max	0.1 max	Rem	0.1 max
		R410	410 min	360 min	-	125 min	-				
	CuZn33	R280	280 to 380	170 max	40 min	55 to 90	G020 ⁽⁵⁾	66.0 to 68.0	0.02 max	0.05 max	0.3 max
		R350	350 to 430	170 min	23 min	95 to 125	-	Pb	Sn	Zn	others
		R420	420 to 500	300 min	6 min	125 to 155	-	0.05 max	0.1 max	Rem	0.1 max
		R500	500 min	450 min	-	155 min	-				
CZ107	CuZn36	R300	300 to 370	180 max	38 min	55 to 95	G020 ⁽⁵⁾	63.5 to 65.5	0.02 max	0.05 max	0.3 max
		R350	350 to 440	170 min	19 min	95 to 125	-	Pb	Sn	Zn	others
		R410	410 to 490	300 min	8 min	120 to 155	-	0.05 max	0.1 max	Rem	0.1 max
		R480	480 to 560	430 min	3 min	150 to 180	-				

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BRONZE – EN 1652

Grade		CONDITION	Mechanical properties ⁽¹⁾					Chemical composition in %			
BS	EN 1652	EN 1652	Tensile strength N/mm ²	Yield strength 0.2 N/mm ²	Elongation A50 % ⁽³⁾	Hardness HV	Grain size µm	Cu	Fe	Ni	P
PB103	CuSn6	R350	350 to 420	300 max	45 min	80 to 110	-	rem	0.1 max	0.2 max	0.01 to 0.4
		R500	500 to 590	450 min	8 min	160 to 190	-	Pb	Sn	Zn	others
		R640	640 to 730	600 min	3 min	200 to 230	-	0.02 max	5.5 to 7.0	0.2 max	0.2 max
		R720	720 min	690 min	-	220 min	-				
PB104	CuSn8	R370	370 to 450	300 max	50 min	90 to 120	-	rem	0.1 max	0.2 max	0.01 to 0.4
		R540	540 to 630	460 min	13 min	170 to 200	-	Pb	Sn	Zn	others
		R660	660 to 750	620 min	3 min	210 to 240	-	0.02 max	7.5 to 8.5	0.2 max	0.2 max
		R740	740 min	700 min	2 min	230 min	-				
/	CuSn3Zn9	R320	320 to 380	230 max	25 min	80 to 110	-	rem	0.1 max	0.2 max	0.2 max
		R430	430 to 520	330 min	6 min	140 to 170	-	Pb	Sn	Zn	others
		R580	580 to 690	520 min	-	180 to 210	-	0.1 max	1.5 to 3.5	7.5 to 10.0	0.2 max
		R660	660 min	610 min	-	200 min	-				

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