

## Cu Zn 15

## TOMBAC

### CHEMICAL COMPOSITION :

Copper	84-86 %
Zinc	balance

### ALLOY DENOMINATIONS :

MATERIAL N° EN :	CW502 L
WN/MATERIAL N° DIN :	2.0240
ROBERT LAMINAGE :	250
EN :	CU ZN15
DIN :	CU ZN15
AFNOR :	CU ZN15
UNS* :	C 23000

\*Unified Numbering System (USA)

### PHYSICAL PROPERTIES :

Density 20° C	8.75	Kg/dm <sup>3</sup>
Melting point	915-965	°C
Modulus of elasticity, longitudinal	122	Gpa
Thermal Conductivity	159	W/M . K
Electrical Conductivity	≥ 17.40	M/Ω mm <sup>2</sup>
Electrical resistivity	≤ 0.0575	Ω mm <sup>2</sup> /M
Coefficient of linear expansion from 20 up to 300°C	18.5 x 10 <sup>-6</sup>	K <sup>-1</sup>
IACS (International Annealed Copper Standard)	≥ 30	%

### WORKABILITY :

Coldworking	Good
Hotworking	Medium
Machining	Poor
Soldering, brazing	Very good
Tin soldering	Very good
Polishing	Very good
Annealing temperature	350-600°C
Stress relieving heat treatment temperature	150-200°C

### MAIN APPLICATIONS :

Various electrical components,  
Appliances, diodes  
Deep drawing, stamping

### AVAILABLE SIZES :

Widths	from 2 up to 350mm
Thickness	from 0.01up to 2.5mm

### CONDITIONING :

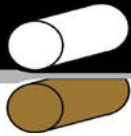
- a) In coils
- b) Cut to length, from 0.5 up to 3 m

### TOLERANCES :

Depending on product

### QUALITY OF EDGES :

Slit edges



**MECHANICAL PROPERTIES :**

**Cu Zn 15**

**EN NORM**

TEMPER	THICKNESS		Rm (MPa)		Rp 0.2 (Mpa)	ELONGATION		Vickers HARDNESS		GRAIN SIZE	
			min	max		0.10 up to 2.5 mm A50 % min	above 2.5 mm A100 % min	min	max	min	max
R260 H055	0.2	5	260	310	(max 170)	36	45	-	-	-	-
			-	-	-	-	-	55	85	-	-
G010	0.2	1	(~340)		(~190)	(~50)	-	-	105	max 0.015	
G020	0.2	2	(~300)		(~125)	(~50)	-	-	85	0.015-0.030	
G035	0.2	2	(~290)		(~110)	(~50)	-	-	75	0.025-0.050	
R300 H085	0.2	5	300	370	(min 150)	16	25	-	-	-	-
			-	-	-	-	-	85	115	-	-
R350 H105	0.2	5	350	420	(min 250)	4	12	-	-	-	-
			-	-	-	-	-	105	135	-	-
R410 H125	0.2	5	410	-	(min 360)	-	-	-	-	-	-
			-	-	-	-	-	125	-	-	-

(For reference only)

**DIN NORM 17670**

TEMPER	THICKNESS	Rm (MPa)		Rp 0.2 (Mpa)	ELONGATION		Vickers HARDNESS	
		min	max		0.10 up to 2.5 mm A50 % min	above 2.5 mm A100 % min	min	max
F26	≥ 0.2	260	310	max 140	45	40	-	-
H55	≤ 5	-	-	-	-	-	55	85
F31	≥ 0.2	310	370	min 200	25	22	-	-
H85	≤ 5	-	-	-	-	-	85	115
F37	≥ 0.2	370	460	min 300	12	8	-	-
H115	≤ 5	-	-	-	-	-	115	145
F46	≥ 0.2	min 460	-	min 410	-	-	-	-
H145	≤ 2	-	-	-	-	-	145	-

**AFNOR NORM NF A51-101**

TEMPER	Vickers HARDNESS		Rm (MPa)	
	min	max	min	max
H11	75	108	300	370
H12	95	125	350	420
H13	117	142	390	460
H14	138	158	430	500
H15	152	172	500	560
H16	165	180	540	600
H17	170	185	570	630

CERTIFIÉ ISO 9001: 2008