

Cu Zn 37

BRASS

CHEMICAL COMPOSITION :

Copper	62.5-64.5 %
Zinc	balance

ALLOY DENOMINATIONS :

MATERIAL N° EN :	CW508 L
WN/MATERIAL N° DIN :	2.0321
ROBERT LAMINAGE :	370
EN :	CU ZN37
DIN :	CU ZN37
AFNOR :	Equivalent au CuZn36 CU ZN37
UNS* :	C 27200

*Unified Numbering System (USA)

PHYSICAL PROPERTIES :

Density 20° C	8.44	Kg/dm ³
Melting point	900-920	°C
Modulus of elasticity, longitudinal	110	GPa
Thermal Conductivity	120	W/M . K
Electrical Conductivity	≥ 11.60	M/Ω mm ²
Electrical resistivity	≤ 0.0862	Ω mm ² /M
Coefficient of linear expansion from 20 up to 300°C	20.2 x 10 ⁻⁶	K ⁻¹
IACS (International Annealed Copper Standard)	≥ 20	%

WORKABILITY :

Coldworking	Good
Hotworking	Good (720-820 °C)
Machining	Medium
Soldering, brazing	Very good
Tin soldering	Very good
Polishing	Good
Annealing temperature	450-650°C
Stress relieving heat treatment temperature	200-300°C

MAIN APPLICATIONS :

Dial, spring
Coining, bending, stamping
Any kind of component with surface treatment
Small pressparts.

CONDITIONING :

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

AVAILABLE SIZES :

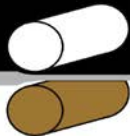
Widths	from 2 up to 350mm
Thickness	from 0.01 up to 2.5mm

TOLERANCES :

Depending on product

QUALITY OF EDGES :

Slit edges



MECHANICAL PROPERTIES :

Cu Zn 37

EN NORM 1652

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
R300 H055	0.2	5	300	370	(max 180)	38	48	-	-	-	-
			-	-	-	-	-	-	55	95	-
G010	0.2	1	(~410)		(~210)	(30)	-	-	120	0.015	
G020	0.2	2	(~360)		(~150)	(40)	-	-	95	0.015-0.030	
G030			(~340)		(~130)	(40)	-	-	90	0.020-0.040	
G050			(~330)		(~110)	(40)	-	-	80	0.035-0.070	
R350 H095	0.2	5	350	440	(min 170)	19	28	-	-	-	-
			-	-	-	-	-	-	95	125	-
R410 H120	0.2	5	410	490	(min 300)	8	12	-	-	-	-
			-	-	-	-	-	-	120	155	-
R480 H150	0.2	2	480	560	(min 430)	3	-	-	-	-	-
			-	-	-	-	-	-	150	180	-
R550 H170	0.2	2	550	-	(min 500)	-	-	-	-	-	-
			-	-	-	-	-	-	170	-	-

(For reference only)

DIN NORM 17670

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	
F30 annealed	≥ 0.2	300	370	max 180	48	43	-	-	-
H55 annealed	≤ 5	-	-	-	-	-	55	95	-
K10 annealed	≥ 0.2	(~400)		(~200)	42	38	-	110	max 0.015
K20 annealed	≤ 1	(~360)		(~150)	48	43	-	90	0.015-0.030
K30 annealed	≥ 0.2	(~340)		(~130)	50	45	-	85	0.020-0.040
K50 annealed	≤ 2	(~330)		(~110)	52	48	-	75	0.035-0.070
F37 1/2 hard	≥ 0.2	370	440	min 200	28	24	-	-	-
H95 1/2 hard	≤ 5	-	-	-	-	-	95	140	-
F44 hard	≥ 0.2	440	540	min 370	12	8	-	-	-
H140 hard	≤ 5	-	-	-	-	-	140	170	-
F54 extra-hard	≥ 0.2	540	610	min 490	-	-	-	-	-
H170 extra- hard	≤ 2	-	-	-	-	-	170	200	-
F61 hard spring	≥ 0.2	610	-	min 580	-	-	-	-	-
H200 hard spring	≤ 2	-	-	-	-	-	200	-	-

AFNOR NORM NF A51-100 for CuZn36

TEMPER	Vickers HARDNESS		Rm (MPa)	
	min	max	min	max
H11	85	125	330	400
H12	105	140	370	440
H13	128	153	420	490
H14	140	160	460	530
H15	158	178	530	600
H16	172	190	590	660
H17	179	192	620	680