

CU NI15 SN8

CHEMICAL COMPOSITION :

Cu	balance
Ni	15%
Sn	8%
Others	< 0.5%

PHYSICAL PROPERTIES :

Density 20° C	8.9	Kg/dm ³
Melting point	1120	°C
Modulus of elasticity, longitudinal	127	GPa
Thermal Conductivity	29	W/M . K
Electrical Conductivity	4.7	M/Ω mm ²
Electrical resistivity	0.215	Ω mm ² /M
Coefficient of linear expansion from 20 up to 300°C	16.4 x 10 ⁻⁶	K ⁻¹
IACS (International Annealed Copper Standard)	8	%

WORKABILITY :

Hotworking	Unsuitable
Coldworking	Very good
Machining	Very good
Diamond cutting	Very good
Polishing	Very good
Soldering, brazing	Very good
Plating	Good
Mill hardened as delivered	250°C-300°C/ 24h
Age hardened by customer	350°C-380°C/ 2h
Shape stability after hardening	Very good

MAIN APPLICATIONS :

Electrical contacts, switches, spring, sliding contacts
Current leads
Heat exchange, seaming,
Clock and watchmaking components, cogs, date disc, dial, index, hands, etc.
Membranes, pens clips, jewelry

CONDITIONING :

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

QUALITY OF EDGES :

Slit edges

PFINODAL

ALLOY DENOMINATIONS :

MATERIAL N° EN :	-
WN/MATERIAL N° DIN :	-
ROBERT LAMINAGE :	550
EN :	-
DIN :	-
AFNOR :	-
UNS* :	C 72900

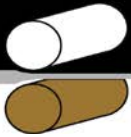
*Unified Numbering System (USA)

AVAILABLE SIZES :

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

TOLERANCES :

Depending on product



MECHANICAL PROPERTIES : PFINODAL

MECHANICAL PROPERTIES COLDROLLED

TEMPER	Vickers HARDNESS		Rm (MPa)		Rp 0.2 (MPa)		Rp 0.05 (MPa)		ELONGATION	
	min	max	min	max					0.10 up to 2.5 mm A50 % min	above 2.5 mm
TB00	100	150	441	586	172	310	165	276	32	60
	-	-	-	-	-	-	-	-	-	-
TD01	150	235	517	689	358	517	345	455	18	35
	-	-	-	-	-	-	-	-	-	-
TD02	190	275	586	758	517	689	448	579	8	20
	-	-	-	-	-	-	-	-	-	-
TD03	210	290	655	827	620	793	552	689	3	12
	-	-	-	-	-	-	-	-	-	-
TD04	220	300	689	896	655	862	586	745	1	10
	-	-	-	-	-	-	-	-	-	-

(For reference only)

MECHANICAL PROPERTIES AGE-HARDENED AS STRIP

TEMPER	Vickers HARDNESS		Rm (MPa)		Rp 0.2 (MPa)		Rp 0.05 (MPa)		Rp 0.01 (MPa)		ELONGATION	
	min	max	min	max							0.10 up to 2.5 mm A50 % min	above 2.5 mm A100 % min
TM00	190	290	655	792	517	655	482	620	448	620	22	36
	-	-	-	-	-	-	-	-	-	-	-	-
TM02	215	315	723	862	620	758	551	723	517	689	15	30
	-	-	-	-	-	-	-	-	-	-	-	-
TM04	245	345	792	930	723	862	655	827	620	792	10	24
	-	-	-	-	-	-	-	-	-	-	-	-
TM06	270	370	896	1034	827	999	723	896	689	862	6	16
	-	-	-	-	-	-	-	-	-	-	-	-
TM08	305	405	1034	1226	965	1171	862	1034	792	965	2	10
	-	-	-	-	-	-	-	-	-	-	-	-

MECHANICAL PROPERTIES AGE-HARDENED BY CUSTOMERS (AS PART)

TEMPER	Vickers HARDNESS		HEAT TREATMENT	Rm (MPa)		Rp 0.2 (MPa)		Rp 0.05 (MPa)		ELONGATION	
	min	max								0.10 up to 2.5 mm A50 % min	A100 % min
TX00	275	350	370°C/ 2h	827	1034	619	896	655	827	6	20
	-	-	-	-	-	-	-	-	-	-	-
TS01	290	365	370°C/ 2h	896	1103	793	1000	724	896	4	16
	-	-	-	-	-	-	-	-	-	-	-
TS02	315	390	370°C/ 2h	1000	1206	931	1138	862	1034	3	12
	-	-	-	-	-	-	-	-	-	-	-
TS03	325	400	370°C/ 2h	1069	1275	1000	1206	931	1103	2	9
	-	-	-	-	-	-	-	-	-	-	-
TS04	335	410	370°C/ 2h	1138	1344	1069	1275	1000	1172	2	6
	-	-	-	-	-	-	-	-	-	-	-