

# CuSn9P

Réf. ASTM n°UNS : C52100

## Réf. Normes Européennes : CW453K

### Indicative Chemical Composition

Cu :	solde
Sn :	8%

### TYPICAL APPLICATIONS

Electrical :	Contact springs, connectors, clips,...
Mechanical:	Springs, bellows and diaphragms, clutch discs, pinions, bridge bearing plates, doctor blades,...

### MECHANICAL CHARACTERISTICS (European Standard : EN 1652) \_\_\_\_\_

Temper H :		H 090	H 135	H 170	H 190	H 210	H 230
Hardness	HV	90-120	135-175	170-200	190-220	210-240	≥ 230

Temper R :		R 370	R 450	R 540	R 600	R 660	R 740
Tensile Strength	TS (MPa)	370-450	450-550	540-630	600-690	660-750	≥ 740
Yield Strength (1)	YS 0,2 (MPa)	≤ 300	≥ 280	≥ 460	≥ 530	≥ 620	≥ 700
Elongation (2)	E50 (%)	≥ 50	≥ 20	≥ 13	≥ 5	≥ 3	≥ 2

### BENDING RADIUS FOLLOWING THE THICKNESS RELATED TO TEMPER ABOVE \_\_\_\_\_

Radius of Bending (3)	90° Good Way	0 × t	0 × t	0 × t	1 × t	1,5 × t	(4)	—
	90° Bad Way	0 × t	0 × t	0,5 × t	2 × t	3 × t	(4)	—

### MECHANICAL CHARACTERISTICS FOLLOWING OLD STANDARDS \_\_\_\_\_

TEMPER OF OLD NF STANDARD		0	H 11	H 12	H 131	H 141	H 15
Hardness	HV	85-115	120-150	170-200	190-220	210-240	≥ 235
Tensile Strength	TS (MPa)	360-450	400-500	530-610	590-680	670-770	≥ 780
Yield Strength	YS 0,2 (MPa)	≤ 310	≥ 270	≥ 430	≥ 550	≥ 630	≥ 760
Elongation	E50 (%)	40	30	15	10	2	—
Radius of bending (3)	90° Good Way	0 × t	0 × t	0 × t	1 × t	1 × t	(4)
	90° Bad Way	0 × t	0 × t	1 × t	2 × t	(4)	(4)

### PHYSICAL CHARACTERISTICS (at 20°C) (5) \_\_\_\_\_

Density (Kg/dm <sup>3</sup> )	Electrical Conductivity (% IA CS)	Electrical Resistivity (μΩ,cm)	Thermal Conductivity (W/m,K)	Modulus of elasticity (kN/nm <sup>2</sup> )	Thermal expansion (10-6/K)	Melting Temperature (°C)	Modulus of shearing (kN/mm <sup>2</sup> )
8,8	13	13,3	54	115	18	870-1030	42

(1) Indicatives values

(2) For Thickness < 2,5 mm

(3) Bending radius is expressed as a function of thickness (t) of the strip

(4) Bending possible to be defined with Griset

(5) Values for annealed temper

This document has been prepared for informational purposes and the values are indicative. Our responsibility can not be undertaken without a formal contract review. Our commercial and technical services remain at your service to study the proper matching of your needs in adequacy with physico-mechanical properties of our material.