

CuSn6P

Réf. ASTM n°UNS : C51900

Réf. Normes Européennes : CW452K

Indicative Chemical Composition

Cu :	solde
Sn :	6%

TYPICAL APPLICATIONS

Electrical :	Contact springs, connectors, clips,...
Mecanical :	Springs, bellows and diaphragms, clutch discs ...

MECHANICAL CHARACTERISTICS (European Standard : EN 1652) _____

Temper H :		H 080	H 125	H 160	H 180	H 200	H 220
Hardness	HV	80-110	125-165	160-190	180-210	200-230	≥ 220

Temper R :		R 350	R 420	R 500	R 560	R 640	R 720
Tensile Strength	TS (MPa)	350-420	420-520	500-590	560-650	640-730	≥ 720
Yield Strength (1)	YS 0,2 (MPa)	≤ 300	≥ 260	≥ 450	≥ 500	≥ 600	≥ 690
Elongation (2)	E50 (%)	≥ 45	≥ 17	≥ 8	≥ 5	≥ 3	—

BENDING RADIUS FOLLOWING THE THICKNESS RELATED TO TEMPER ABOVE _____

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

MECHANICAL CHARACTERISTICS FOLLOWING OLD STANDARDS _____

TEMPER OF OLD NF STANDARD		0	H 11	H 121	H 131	H 141	H 151
Hardness	HV	80-105	110-140	145-175	165-195	190-220	≥ 220
Tensile Strength	TS (MPa)	340-430	380-480	460-540	510-600	560-640	≥ 620
Yield Strength	YS 0,2 (MPa)	≤ 250	≥ 220	≥ 360	≥ 470	≥ 520	≥ 600
Elongation	E50 (%)	40	30	15	5	—	—
Radius of bending (3)	90° Good Way	0 × t	0 × t	0 × t	0,5 × t	1 × t	(4)
	90° Bad Way	0 × t	0 × t	0,5 × t	1,5 × t	(4)	(4)

PHYSICAL CHARACTERISTICS (at 20°C) (5) _____

Density (Kg/dm ³)	Electrical Conductivity (% IA CS)	Electrical Resistivity (μΩ,cm)	Thermal Conductivity (W/m,K)	Modulus of elasticity (kN/nm ²)	Thermal expansion (10-6/K)	Melting Temperature (°C)	Modulus of shearing (kN/mm ²)
8,8	16	10,5	57	120	17	900-1050	45

(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.