

FPG

Réf. ASTM n°UNS : C19210

Indicative Chemical Composition

Cu :	solde
Fe :	0.10 %
P :	0,03 %

TYPICAL APPLICATIONS

Electronic and Electrical : Lead Frames, very high conductivity and good heat withstanding

MECHANICAL CHARACTERISTICS

Temper H :		H 80	H 100	H 110	H 130	H 130
Hardness	HV	80-110	100-130	110-140	120-145	130-160

Temper R :		R 300	R 360	R 390	R 415	R 450
Tensile Strength	TS (MPa)	300-380	360-440	390-450	415-480	450-520
Yield Strength (1)	YS 0,2 (MPa)	≥ 150	≥ 280	≥ 330	≥ 380	≥ 430
Elongation	E50 (%)	≥ 15	≥ 6	≥ 3	≥ 3	≥ 2

BENDING RADIUS FOLLOWING THE THICKNESS RELATED TO TEMPER ABOVE

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

MECHANICAL CHARACTERISTICS FOLLOWING OLD STANDARD

Temper of old NF Standard		0	H 11	H 12	H 13	H 14,1	H 14,2
Hardness	HV	70-85	90-105	105-120	110-125	115-130	≥ 120
Tensile Strength	TS (MPa)	250-310	265-335	300-380	330-410	360-450	≥ 400
Yield Strength	YS 0,2 (MPa)	≤ 170	≥ 210	≥ 300	≥ 315	≥ 330	≥ 370
Elongation	E50 (%)	30	25	12	5	2	—
Radius of bending (2)	90° Good Way	0 × t	0 × t	0 × t	0 × t	0,5 × t	(3)
	90° Bad Way	0 × t	0 × t	0 × t	0,5 × t	1 × t	(3)

PHYSICAL CHARACTERISTICS (at 20°C) (4)

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)
8,9	> 85	< 2	360	128	17	1070-1090	45

(1) Indicative values

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

(4) Bending possible to be defined with Griset

(4) 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.