TG GRISET

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CU-PHC

Réf. ASTM n°UNS : C10300

Réf. Normes Européennes : CW020A

Indicative Chemical Composition	
Cu :	> 99,95 %
P :	0.001-0.006 %

TYPICAL APPLICATIONS	
Electrical :	Special application such as glass/metal sealing in vacuum tubes, electrical equipments used in reducing atmosphere at hight temperature,…
Mechanical :	Applications requiring a welding or heating operation in a reducing atmosphere

MECHANICAL CHARACTERISTICS (European standard : EN 13599)

Temper H :		H 040	H 065	H 090	H 110
Hardness	HV	40-65	65-95	90-110	≥ 110

Temper R :		R 220	R 240	R 290	R 360
Tensile Strength	TS (MPa)	220-260	240-300	290-360	≥ 360
Yield Strength *(1)*	YS 0,2 (MPa)	≤ 140	≥ 180	≥ 250	≥ 320
Elongation *(2)*	E50 (%)	≥ 33	≥ 8	≥ 4	≥ 2

BENDING RADIUS FOLLOWING THE THICKNESS RELATED TO TEMPER ABOVE

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

MECHANICAL CHARACTERISTICS FOLLOWING OLD STANDARD

Temper NF		0	H 11	H 12	H 13	H 14,1	H 14,2
Hardness	HV	46-65	60-85	75-105	90-110	105-125	≥ 110
Tensile Strength	TS (MPa)	200-260	230-280	260-320	290-350	310-400	≥ 325
Yield Strength	YS 0,2 (MPa)	≤ 120	≥ 125	≥ 250	≥ 275	≥ 300	≥ 300
Elongation	E50 (%)	25	20	10	4	1	_
Radius of bending *(3)*	90° Good Way	0 × t	0 × t	0 × t	0 × t	0,5 × t	*(4)*
	90° Bad Way	0 × t	0 × t	0 × t	0,5 × t	1 × t	*(4)*

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

Density (Kg/dm3)	Electrical Conductivity (% IA CS)	Electrical Resistivity (μΩ,cm)	Thermal Conductivity (W/m,K)	Modulus of Elasticity (kN/nm²)	Thermal Expansion (10-6/K)	Melting Temperature (°C)	Modulus of Shearing (kN/mm²)
8,9	> 100	< 1,72	390	120	17	1083	45

(1) Indicative 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

Review of 09.2009

- NON CONTRACTUAL DOCUMENT -