

C10300 (Cu-XLP) 18 08 US

Comparable standards: UNS C10300 • EN CW020A
 Aurubis designations: C103 • PNA 209 • SM0011

Description Cu-XLP with a nominal composition of min. 99.95 % copper combines high conductivity with the advantage of an extra low phosphorus content. The alloy is therefore easier to weld compared with Cu-ETP but has almost the same conductivity.

Composition

Cu*	P
[%]	[%]
99.95 min	0.001 – 0.005

*) Incl. Ag

Physical properties

Melting point	Density	Specific heat cap. at 20°C	Electrical cond.	Thermal cond. at 20°C	Mod. of elasticity	Coef. of therm exp. at 20°C
[°F] [°C]	[lb/in³] [g/cm³]	[Btu/lb°F] [kJ/kgK]	[%IACS] [MS/m]	[Btu/ft h °F] [W/mK]	x1000 ksi [GPa]	[10 ⁻⁶ /°F] [10 ⁻⁶ /K]
1981 1083	0.323 8.94	0.092 0.394	99 57	223 386	17 117	9.8 17.6

The specified conductivity applies to the soft condition only

Mechanical properties

	Tensile strength Rm [ksi] [MPa]	Yield strength Rp0.2 nominal [ksi] [MPa]	Elongation 2'' nominal [%]	Hard-ness nominal HR30T HV	min bend ratio 90°		min. bend ratio 180°	
					GW	BW	GW	BW
Soft	26-38 179-262	10 69	35		0.0	0.0	0.0	0.0
H02 (1/2H)	37-46 255-317	37 255	20	50 90	0.0	0.5	0.0	1.0
H04 (H)	43-52 297-359	45 310	8	58 100	1.0	2.0	2.0	3.0
H06 (EH)	47-56 324-386	50 349	3	60 105	2.0	3.0	2.5	
H08 (SH)	50-58 345-400	52 359	3	63 110	3.0		4.0	
H10 (ES)	52 min 359 min	54 373	2	61 min 112 min				

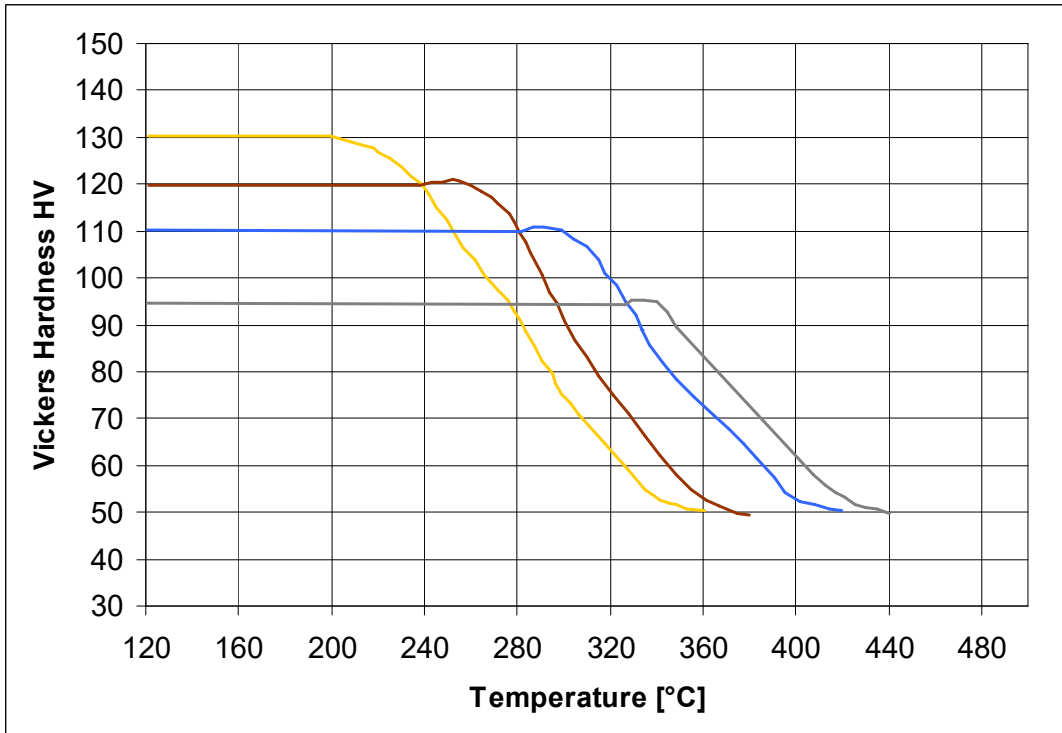
Other tempers are available upon request.
 GW bend axis transverse to rolling direction. BW bend axis parallel to rolling direction

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Fabrication properties

Electrical and thermal conductivity	excellent
Corrosion resistance	excellent
Formability	excellent
Weldability	good

Heat resistance and Softening Characteristic



Annealing time 2 min.

Temperatures at 1 min annealing time will be 10 degrees **higher**.
 Temperatures at 4 min annealing time will be 10 degrees **lower**.

Typical uses Telecommunication cables, Terminals, Clad products, Busbars, Electrical conductors

Applicable specifications ASTM B152

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