

C12000 (Cu-DLP) 18 08 US

Comparable standards: UNS C12000 • EN CW023A • JIS C1201
 Aurubis designations: C120 • PNA220

Description Phosphorus-Deoxidized Copper – Cu-DLP with a nominal composition of 99.90 % minimum copper combine high conductivity with the advantage of low phosphorus addition. The alloy is therefore easier to weld compared with Cu-ETP but has almost the same conductivity.

Composition

Cu*	P
[%]	[%]
99.90 min	0.004-0.012

*) 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 8.9	0.092 0.394	98 57	223 386	17 117	9.8 17.6

The specified conductivity applies to the soft condition only

Mechanical properties

Temper	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

Fabrication properties

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

Typical uses Telecommunication cables

Applicable specifications ASTM B152

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