C210 (CuZn5)

Composition

Cu* (%)	Fe (%)	Pb (%)	Zn (%)
94.0-96.0	0.05 max	0.05 max	rem

*) Cu + sum of named elements min 99.8 %

Physical Properties

Temper	Melting point (liquidus) °F °C	Density lb/in^3 g/cm3	Specific heat cap. at 68 F (20 °C) Btu/lb°F kJ/(kg°K)	Electrical cond. Nom in black % IACS	Thermal cond. at 68 F (20 °C) Btu/ft h °F W/(m°K)	Mod. of elasticity X1000 ksi GPa	Coef.of therm.exp at 68 F (20 °C) 10^{-6}/°F 10-6/°C
All	1950 1066	0.32 8.86	0.09 0.38	56 56	135 234	17 117	10 18

Mechanical Properties

At max 0.040"
(1 mm)

Temper	$R_{p0.2}$ Yield strength ksi N/mm^2	R_m Tensile strength ksi N/mm^2	A_{50} Elongation 2" %	Hardness for reference HR30T HV	Min bend ratio 90°		Min bend ratio 180°	
					GW	BW	GW	BW
Soft	10 69	34-40 235-276	45		0.0	0.0	0.0	0.0
H02 (1/2H)	44 304	42-52 290-359	17	54	0.0	0.0	0.0	1.0
H04 (H)	53 366	50-59 345-407	5	62	0.0	0.0	1.0	1.5
H06 (EH)	59 407	56-64 386-441	2	65	0.5	1.0	1.0	1.5
H08 (SH)	63 435	60-68 414-469	2	67	1.0	2.0	1.0	3.0
H10 (ES)	64 441	61-69 421-476	1	68	1.5	3.0	1.5	

Other tempers are avaliable upon request.
Data for information only and not for use as purchase specification.
Yield strength, Elongation and Hardness are typical values for each temper.

C210 (CuZn5)

Alloy attributes

Gilding, 95% - 210 Alloy has a nominal composition of 95 % copper and 5 % zinc with a color almost identical to copper and similar corrosion resistance but with a slightly greater strength and better ductility than copper or 110 alloy. This alloy has the optimum bend or formability characteristic of all the copper alloys and is rated 100. It is the most malleable of the copper alloys and can be coined into plaques, medallions, buckles with extremely sharp impressions. 210 alloy is the optimum material for vitreous enameling and gold plating. The high resistance to stress-corrosion cracking and its durability make it ideal for engineering applications, which must withstand the rigors of outdoor and industrial service.

Optimum formability
Excellent electrical and thermal conductivity
Excellent corrosion resistance

Typical applications

Coins, medals, tokens, emblems, buckles, jewelry, plaques, medallions, base for gold plate and vitreous enameling, fuse caps and primers, bullet jackets.

Design limitations

Exposure to high sulfide media should be avoided.

Applicable specifications

ASTM B36