

C113 (STP)

Composition

Cu* (%)	Ag (%)
99.90 min	0.027 min

*) Incl. Ag

Physical Properties

Temper	Melting point (liquidus)	Density lb/in ³ g/cm ³	Specific heat cap. at 68 F (20 °C)	Electrical cond. Nom in black % IACS	Thermal cond. at 68 F (20 °C)	Mod. of elasticity X1000 ksi GPa	Coef. of therm.exp at 68 F (20 °C)
	°F °C		Btu/lb°F kJ/(kg°K)		Btu/ft h °F W/(m°K)		10 ⁻⁶ /°F 10 ⁻⁶ /°C
All	1980	0.322	0.092	100	224	17	9.8
	1082		0.394		388		117

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	26-38 179-262	35		0.0	0.0	0.0	0.0
H02 (1/2H)	37 255	37-46 255-317	20	50 90	0.0	0.5	0.0	1.0
H04 (H)	45 310	43-52 297-359	8	58 100	1.0	2.0	2.0	3.0
H06 (EH)	50 349	47-56 324-386	3	60 105	2.0	3.0	2.5	
H08 (SH)	52 359	50-58 345-400	3	63 110	3.0		4.0	
H10 (ES)	54 373	52 min 359 min	2	61 min 112				

Other tempers are available upon request.

Data for information only and not for use as purchase specification.

Yield strength, Elongation and Hardness are typical values for each temper.

C113 (STP)

Alloy attributes

Superior electrical and thermal conductivity
Excellent corrosion resistance
Good formability
High scrap value

Typical applications

Design limitations

Exposure to hydrogen at elevated temperatures causes embrittlement. Brazing in hydrogen containing atmospheres must be avoided. Brazing and welding must be done in inert atmospheres only. Exposure to high sulfide media should be avoided.

Applicable specifications

ASTM B152