



C102 Copper Alloy Wire

Introduction

C102 is an oxygen-free copper which has better forming, resistance to hydrogen embrittlement, and brazing characteristics than C110 ETP. C102 has good solderability and corrosion resistance and is used for high current applications.

To learn more please contact our [sales department](#).

C102 Copper Alloy Wire

Chemical Composition - Limits		Chemical Composition - Nominal	
Cu 99.95 min - incl Ag (100 less all impurities)		Cu 99.95	
O 0.001 max		O 0.001	
Specifications		Fabrication Index	
ASTM B1		Soldering	5 - Excellent
ASTM B2		Hot Worked	5 - Excellent
ASTM B3		Cold Worked	5 - Excellent
ASTM B33		Brazing	5 - Excellent
ASTM B48		Machinability	1 - Poor
ASTM B152			
ASTM B246			
ASTM B272			
ASTM B298			
ASTM B355			

Physical Properties

Annealing Range (Min)	700 °F
Annealing Range (Max)	1200 °F
Density	0.323 lb/in ³
Electrical Resistivity (Annealed)	10.3 Ω·cir-mil/ft @ 68 °F
Electrical Conductivity (Annealed)	101% IACS @ 68 °F
Thermal Conductivity	226 Btu/ft ² /ft·hr/°F @ 68 °F
Coefficient of Thermal Expansion	9.8 per °F (68-572 °F)
Modulus of Elasticity (Tension)	17 ksi
Modulus of Rigidity (Tension)	6 ksi
Melting Point (Solidus)	1,700 °F

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Melting Point (Liquidus)

1,900 °F

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Round Wire

TEMPER NAME	TEMPER CODE	TENSILE STRENGTH (ksi)		MILL LIMITS (inch)
		Typical		
Annealed	OS050	35.0		.0010 - .1285 inch
Hard Drawn	H04	60.0		

Square Wire

TEMPER NAME	TEMPER CODE	TENSILE STRENGTH (ksi)		MILL LIMITS (inch)
		Typical		
Annealed	OS050	35.0		.0100 - .0808 inch
Hard Drawn	H04	60.0		

Rolled Flat

TEMPER NAME	TEMPER CODE	TENSILE STRENGTH (ksi)		MILL LIMITS (inch)
		Min	Max	
Annealed	OS050	26.0	38.0	Thickness: .0100 - .0500 inch
1/4 Hard	H01	34.0	42.0	
1/2 Hard	H02	37.0	46.0	Width: .0150 - .2500 inch
Hard	H04	43.0	52.0	
Spring	H08	50.0	58.0	