






C521 Bronze Alloy Wire

Alloy C521 is a high tin alloy of the phosphor bronze family. The additional tin relative to the more commonly used C510 results in higher mechanical properties with a modest reduction in electrical conductivity. Applications include electronic parts, springs, contacts, switch parts and fasteners.

Mechanical Properties				
 Round Wire				
TEMPER NAME	TEMPER CODE	TENSILE STRENGTH (ksi)		MILL LIMITS
		MIN	MAX	
Annealed		53	68	.0010 - .1285 inch
1/4 Hard	H01	74	91	
1/2 Hard	H02	95	115	
3/4 Hard	H03	113	135	
Hard	H04	125	150	
 Square Wire				
TEMPER NAME	TEMPER CODE	TENSILE STRENGTH (ksi)		MILL LIMITS
		MIN	MAX	
Annealed		53	68	.0100 - .0808 inch
1/4 Hard	H01	74	91	
1/2 Hard	H02	95	115	
3/4 Hard	H03	113	135	
Hard	H04	125	150	
 Rolled Flat				
TEMPER NAME	TEMPER CODE	TENSILE STRENGTH (ksi)		MILL LIMITS
		MIN	MAX	
Annealed		53	67	Thickness: .0100 - .0500 inch Width: .0150 - .2500 inch
1/2 Half Hard	H02	69	84	
Hard	H04	85	100	
Extra Hard	H06	97	112	
Spring	H08	105	119	
Extra Spring	H10	110	122	
Physical Properties				
Melting Point (Liquidis)		1880°F		
Melting Point (Solidus)		1620°F		
Density		0.318 lbs/cu in		
Electrical Resistivity (Annealed)		79.8 ?(cir mil/ft) @ 68°F		
Electrical Conductivity (Annealed)		13% IACS @ 68°F		
Thermal Conductivity (Solutionized-Aged)		36 Btu ft/sq ft hr °F @ 68°F		
Coefficient of Thermal Expansion		0.0000101°F (68-572°F)		
Modulus of Elasticity (Tension)		16000 ksi		
Modulus of Rigidity		6000 ksi		

Custom constructions are available, please contact the sales department

The information provided on this page is for reference purposes only.

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