



C651 Silicon Bronze Alloy Wire

Alloy C651 is a corrosion resistant copper alloy. It is primarily used as a welding rod and for mechanical fasteners and electrical connections.

Mechanical Properties

Round Wire				
TEMPER NAME	TEMPER CODE	TENSILE STRENGTH (ksi)		MILL LIMITS
		MIN	MAX	
Annealed	O61	38	55	.0010 - .1285 inch
1/4 Hard	H01	60	75	
1/2 Hard	H02	75	95	
Hard	H04	90	110	
Spring	H08	100		

Square Wire				
TEMPER NAME	TEMPER CODE	TENSILE STRENGTH (ksi)		MILL LIMITS
		MIN	MAX	
Annealed	O61	38	55	.0100 - .0808 inch
1/4 Hard	H01	60	75	
1/2 Hard	H02	75	95	
Hard	H04	90	110	
Spring	H08	100		

Rolled Flat				
TEMPER NAME	TEMPER CODE	TENSILE STRENGTH (ksi)		MILL LIMITS
		MIN	MAX	
Annealed	O61	40	50	Thickness: .0100 - .0500 inch Width: .0150 - .2500 inch
1/4 Hard	H01	42	52	
1/2 Hard	H02	47	57	
Hard	H04	60	70	
Extra Hard	H06	67	76	
Spring	H08	71	79	

Physical Properties	
Melting Point (Liquidis)	1940°F
Melting Point (Solidus)	1890°F
Density	0.316 lbs/cu in
Electrical Resistivity (Annealed)	86.4 ?(cir mil/ft) @ 68°F
Electrical Conductivity (Annealed)	12 % IACS @ 68°F
Thermal Conductivity (Solutionized-Aged)	33 Btu ft/sq ft hr °F @ 68°F
Coefficient of Thermal Expansion	0.0000099°F (68-572°F)
Modulus of Elasticity (Tension)	17000 ksi
Modulus of Rigidity	6400 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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