



C752 Nickel Silver 18% Alloy Wire

Introduction

Alloy C752 is an 18% nickel silver alloy combining corrosion resistance with strength and a lustrous silver color. Applications include optical frames and parts, springs, surgical instruments, jewelry, resistors and contacts.

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

C752 Nickel Silver 18% Alloy Wire

Chemical Composition - Limits		Chemical Composition - Nominal	
Cu 63.0-66.5 (99.5 min incl named elements)		Cu 65	
Ni 16.5-19.5		Ni 18	
Zn rem		Zn 35	
Pb 0.05 max			
Fe 0.25 max			
Mn 0.50 max			
Specifications		Fabrication Index	
ASTM B122		Soldering	5 - Excellent
ASTM B206		Hot Worked	1 - Poor
		Cold Worked	5 - Excellent
		Brazing	5 - Excellent
		Machinability	1 - Poor

Physical Properties

Annealing Range (Min)	1100 °F
Annealing Range (Max)	1400 °F
Density	0.316 lb/in ³
Electrical Resistivity (Annealed)	172.9 Ω·cir-mil/ft @ 68 °F
Electrical Conductivity (Annealed)	6% IACS @ 68 °F
Thermal Conductivity	19 Btu/ft ² /ft·hr/°F @ 68 °F
Coefficient of Thermal Expansion	9 per °F (68-572 °F)
Modulus of Elasticity (Tension)	18 ksi
Modulus of Rigidity (Tension)	6 ksi
Melting Point (Solidus)	1,700 °F
Melting Point (Liquidus)	1,900 °F

C752 Nickel Silver 18% Alloy Wire

Round Wire

TEMPER NAME	TEMPER CODE	TENSILE STRENGTH (ksi)		MILL LIMITS (inch)
		Min	Max	
Annealed		53.0	63.0	.0010 - .1285 inch
1/4 Hard	H01	68.0	84.0	
1/2 Hard	H02	83.0	97.0	
Hard	H04	99.0	111	
Spring	H08	105		

Square Wire

TEMPER NAME	TEMPER CODE	TENSILE STRENGTH (ksi)		MILL LIMITS (inch)
		Min	Max	
Annealed		53.0	63.0	.0100 - .0808 inch
1/4 Hard	H01	68.0	84.0	
1/2 Hard	H02	83.0	97.0	
Hard	H04	99.0	111	
Spring	H08	105		

Rolled Flat

TEMPER NAME	TEMPER CODE	TENSILE STRENGTH (ksi)		MILL LIMITS (inch)
		Min	Max	
Annealed		53.0	63.0	Thickness: .0100 - .0500 inch Width: .0150 - .2500 inch
1/4 Hard	H01	58.0	72.0	
1/2 Hard	H02	66.0	80.0	
3/4 Hard	H03	74.0	86.0	
Hard	H04	78.0	91.0	

C752 Nickel Silver 18% Alloy Wire

Rolled Flat

TEMPER NAME	TEMPER CODE	TENSILE STRENGTH (ksi)		MILL LIMITS (inch)
		Min	Max	
Spring	H08	90.0	101	