C172 Beryllium Copper Alloy Wire

Beryllium Copper alloys combine formability with very high strength properties when aged. Applications are in springs, connectors, switches and automotive parts. Special heat treating of the wire at the mill produces a “Mill Hardened” (HM) tempered Beryllium Copper wire which can then be formed and used without additional heat treatment.

Mechanical Properties

Round Wire

TEMPER NAME	TEMPER CODE	TENSILE STRENGTH (ksi)		MILL LIMITS
		MIN	MAX	
Annealed (A)	TB00	58	78	.0010 - .1285 inch
1/4 Hard	TD01	90	115	
1/2 Hard	TD02	110	135	
3/4 Hard	TD03	130	155	
Hard	TD04	140	165	
AT	TF00	160	200	
1/4 HT	TH01	175	210	
1/2 HT	TH02	185	215	
3/4 HT	TH03	190	230	
HT	TH04	195	230	

Square Wire

TEMPER NAME	TEMPER CODE	TENSILE STRENGTH (ksi)		MILL LIMITS
		MIN	MAX	
Annealed (A)	TB00	58	78	.0100 - .0808 inch
1/4 Hard	TD01	90	115	
1/2 Hard	TD02	110	135	
3/4 Hard	TD03	130	155	
Hard	TD04	140	165	
AT	TF00	160	200	
1/4 HT	TH01	175	210	
1/2 HT	TH02	185	215	
3/4 HT	TH03	190	230	
HT	TH04	195	230	

Rolled Flat

TEMPER NAME	TEMPER CODE	TENSILE STRENGTH (ksi)		MILL LIMITS
		MIN	MAX	
Annealed (A)	TB00	60	78	Thickness: .0100 - .0500 inch Width: .0150 - .2500 inch
1/4 Hard	TD01	75	88	
1/2 Hard	TD02	85	100	
Hard	TD03	100	130	
AT	TF00	165	195	
1/4 HT	TH01	175	205	
1/2 HT	TH02	185	215	
HT	TH03	190	220	

Custom constructions are available, please contact the sales department

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

Fisk Alloy Wire, Inc. • P.O. Box 26 • 10 Thomas Road • Hawthorne, NJ 07507 U.S.A.
Phone: 855-4PERCON (855-473-7266) • Fax (973) 427-4585 • E-mail: sales@fiskalloy.com

C172 Beryllium Copper Alloy Wire

Physical Properties	
Melting Point (Liquidis)	982°C
Melting Point (Solidus)	866°C
Minimum Solutionizing Temperature	788°C
Density	8.24871 gm/cu cm
Electrical Resistivity (Annealed)	7.6804 ?? -cm @ 20°C
Electrical Conductivity (Age Hardedned)	0.12879 MegaSiemens /cm @ 20°C
Thermal Conductivity (Solutionized-Aged)	(1) 107-130 W/m · °K @ 20°C
Coefficient of Thermal Expansion	0.00001782°C (20-300°C)
Modulus of Elasticity (Tension)	127600 Mpa
Modulus of Rigidity	50300 Mpa
(1) Expressed as a range per CDA	

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