C725 Copper-Nickel-Tin Alloy Wire

Introduction

Alloy C725 is a moderate strength, low conductivity alloy with excellent bare solderability and corrosion resistance. Applications include electronic parts, springs, connectors and wire wrap terminals.

To learn more please contact our sales department.

Fisk Alloy Wire Inc.
P.O. Box 26
10 Thomas Road N.
Hawthorne, NJ 07506 U.S.A.

Phone: (973) 825-8500
Fax: (973) 427-4585
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Chemical Composition - Limits	Chemical Composition - Nominal
Cu rem (99.8 min incl named elements)	Cu 88.2
Ni 8.5-10.5 - incl Co	Ni 9.5
Sn 1.8-2.8	Sn 2.3
Zn 0.50 max	
Pb 0.05 max	
Fe 0.60 max	
Mn 0.20 max	

Specifications	Fabrication Index	
ASTM B122	Soldering	5 - Excellent
	Hot Worked	5 - Excellent
	Cold Worked	5 - Excellent
	Brazing	5 - Excellent
	Machinability	1 - Poor

Physical Properties

Annealing Range (Min)	1200 °F
Annealing Range (Max)	1475 °F
Density	0.321 lb/in³
Electrical Resistivity (Annealed)	94.3 Ω·cir-mil/ft @ 68 °F
Electrical Conductivity (Annealed)	11% IACS @ 68 °F
Thermal Conductivity	31 Btu/ft²/ft·hr/°F @ 68 °F
Coefficient of Thermal Expansion	9.2 per °F (68-572 °F)
Modulus of Elasticity (Tension)	20 ksi
Modulus of Rigidity (Tension)	7 ksi
Melting Point (Solidus)	1,750 °F

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Melting Point (Liquidus)	1,920 °F

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Round Wire

TEMPER NAME	TEMPER CODE	TENSILE STRENGTH (ksi) Min	TENSILE STRENGTH (ksi) Max	MILL LIMITS (inch)
Annealed		55.0	65.0	.0010 - .1285 inch
1/4 Hard	H01	65.0	80.0	
1/2 Hard	H02	75.0	90.0	
3/4 Hard	H03	80.0	95.0	
Hard	H04	95.0	110	
Spring	H08	110	125	

Rolled Flat

TEMPER NAME	TEMPER CODE	TENSILE STRENGTH (ksi) Min	TENSILE STRENGTH (ksi) Max	MILL LIMITS (inch)
Annealed		45.0	65.0	Thickness: .0100 - .0500 inch Width: .0150 - .2500 inch
1/4 Hard	H01	55.0	75.0	
1/2 Hard	H02	65.0	80.0	
3/4 Hard	H03	75.0	90.0	
Hard	H04	80.0	95.0	
Spring	H08	85.0	100	

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