C7025 High Performance Alloy Wire

Introduction

Alloy C7025 is a High Performance Alloy that combines strength, conductivity, formability and stress relaxation resistance into a unique set of properties. C7025 has the qualities of some of the Beryllium Coppers without containing any Beryllium. The alloy is a thermally aged material. It achieves it' s properties by combinations of cold work and heat treatments, all of which is done at the mill. The alloy' s high strength and conductivity combined with its formability and stress relaxation properties make C7025 an excellent electronic alloy, particularly in high temperature environments.

To learn more please contact our sales department.

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Chemical Composition - Limits	Chemical Composition - Nominal
Cu rem (99.5 min incl named elements)	Cu 96.3
Ni 2.2-4.2 - incl Co	Ni 3.0
Si 0.25-1.2	Si 0.7
Mg 0.05-0.30	
Zn 1.0 max	
Pb 0.05 max	
Fe 0.20 max	
Mn 0.10 max	

Specifications	Fabrication Index	
ASTM B422	Soldering	
ASTM B888	Hot Worked	
	Cold Worked	
	Brazing	
	Machinability	1 - Poor

Physical Properties

Density	0.318 lb/in³
Electrical Resistivity (Annealed)	25.9 Ω·cir-mil/ft @ 68 °F
Electrical Conductivity (Annealed)	40% IACS @ 68 °F
Thermal Conductivity	98 Btu/ft²/ft·hr/°F @ 68 °F
Modulus of Elasticity (Tension)	19 ksi
Melting Point (Solidus)	1,750 °F
Melting Point (Liquidus)	1,920 °F

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Round Wire

TEMPER NAME	TEMPER CODE	TENSILE STRENGTH (ksi) Min	Max	MILL LIMITS (inch)
1/2 Hard	TL02	80.0	100	.0010 - .1285 inch
3/4 AT	TL03	100	120	
1/2 AT + SR	TR02	88.0		
AM	TM00	90.0	110	
1/2 HM	TM02	95.0	120	
3/4 HM	TM03	100	125	

Square Wire

TEMPER NAME	TEMPER CODE	TENSILE STRENGTH (ksi) Min	Max	MILL LIMITS (inch)
1/2 Hard	TL02	80.0	100	.0100 - .0808 inch
3/4 AT	TL03	100	120	
1/2 AT + SR	TR02	88.0		
AM	TM00	90.0	110	
1/2 HM	TM02	95.0	120	
3/4 HM	TM03	100	125	

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