



C151 Zirconium Copper Alloy Wire

Introduction

Alloy C151 has excellent solderability, high conductivity, and good strength. C151 has superior softening resistance compared to pure copper C110, which will soften upon heating, limiting the application environment. Applications can be found in high current interconnects, pin grids, welding wire, or other elevated temperature applications.

Physical Properties and Specifications

PHYSICAL PROPERTIES			SPECIFICATIONS
PROPERTY	ENGLISH	METRIC	ASTM B246
Melting Point (Liquidus)	2008°F	1098°C	ASTM B747
Melting Point (Solidus)	1886°F	1030°C	
Density	0.323 lbs/in ³	8.94072 g/cm ³	
Electrical Resistivity (Annealed)	11.5 Ω-cmil/ft @ 68°F	1.9118 μΩ-cm @ 20°C	
Electrical Conductivity (Annealed)	95% IACS @ 68°F	0.55615 MS/cm @ 20°C	
Coefficient of Thermal Expansion	0.0000098°F(68-572°F)	0.00001764°C (20-300°C)	
Modulus of Elasticity (Tension)	17,500 ksi	120,700 MPa	
Modulus of Rigidity	6,730 ksi	46,400 MPa	


Custom constructions are available, please contact the sales department.


Fisk Alloy Wire, Inc.
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 ROUND WIRE							
TEMPER NAME	TEMPER CODE	TENSILE STRENGTH (ksi)		TENSILE STRENGTH (N/mm ²)		MILL LIMITS (inches)	MILL LIMITS (mm)
		min	max	min	max		
Annealed	OS015	34	40	235	275	.0010-.01285	.0254-3.264
¼ Hard	H01	40	55	275	380		
½ Hard	H02	50	62	345	425		
Hard	H04	60	72	415	495		
Spring	H08	70		485			

 SQUARE WIRE							
TEMPER NAME	TEMPER CODE	TENSILE STRENGTH (ksi)		TENSILE STRENGTH (N/mm ²)		MILL LIMITS (inches)	MILL LIMITS (mm)
		min	max	min	max		
Annealed	OS015	34	40	235	275	.0010-.0808	.2540-1.905
¼ Hard	H01	40	55	275	380		
½ Hard	H02	50	62	345	425		
Hard	H04	60	72	415	495		
Spring	H08	70		485			

 ROLLED FLAT WIRE							
TEMPER NAME	TEMPER CODE	TENSILE STRENGTH (ksi)		TENSILE STRENGTH (N/mm ²)		MILL LIMITS (inches)	MILL LIMITS (mm)
		min	max	min	max		
Annealed	OS015	37	42	255	290	Thickness: .0100-.0500	Thickness: .2540-1.905
½ Hard	H02	43	51	295	350		
Hard	H04	53	62	365	425	Width: .0150-.2500	Width: .3810-6.350
Spring	H08	64	71	440	490		

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