

# Resistance Alloy 90

## 90 Ohm , CuNi10

90 Ohm , CuNi10				
<b>Identification</b>				
VMI No.	90 Ohm			
UNS No.	C70700			
Relevant Specifications	ASTM B122, ASTM B151			
Similar to	Resistance Alloy 90, CNR90/10, NICKAL10R			
Forms	Strip	Wire	Bar	Sheet
	*	*		*
Description	Low ohm electrical resistance alloy.			
<b>Chemical Composition (%)</b>				
Copper	90	Nominal		
Nickel	10	Nominal		
<b>Mechanical Properties</b> (all values are for annealed temper; not intended for specification)				
Tensile	45	ksi		
	310	MPa		
Yield	23	ksi		
	150	MPa		
Elongation	35	% in 2"		
	35	% in 50mm		
Hardness	40	HRB		
	82	Hv		
<b>Physical Properties</b>				
Density	0.323	lb/in <sup>3</sup>		
	8.941	g/cm <sup>3</sup>		
Resistivity (Nominal)	90	Ohm•circ mil/ft		
	15	microOhm•cm		
Coefficient of Thermal Expansion from 68°F (20°C) to  (micro-in/in-°F) (micro-m/m-K)	212°F	392°F	572°F	752°F
	100°C	200°C	300°C	400°C
	-----	-----	-----	-----
	-----	-----	-----	-----

