

## Properties of Paliney® 9

Paliney® 9 is an alloy with a chemical composition similar to that of Paliney® 7. It is basically a high palladium, silver alloy that also contains gold, platinum, and copper. The principal difference in composition is that Paliney® 9 does not contain zinc. It is used as a spring arm and contact in miniaturized relays where higher electrical energy levels are attained than are normally used with noble metal contacts. With the absence of zinc, Paliney® 9 does not age harden in the same manner as Paliney® 7. Therefore, its best spring characteristics are developed through cold drawing or work hardening followed by a stress-relieving operation. This produces wire that has sufficient ductility to permit forming and adequate strength to be used as a cantilever member. Paliney® 9 is used most often for low current make-and-break switching applications. However, its hardness does permit its use in sliding contact applications. The corrosion resistance of this alloy is similar to that of Paliney® 7.

Properties of Paliney 9	Stress-Relieved
Resistivity, normal, ohm-cmf	220
Microhm cm	36.6
Density, grams/cc, nominal	11.9
Dwt./cu. in., nominal	125
Solidus Temperature	
F, nominal	1950
C, nominal	1065
Coefficient of Linear Expansion	
Modulus of Elasticity, psi, nominal	17x10(6)
Proportional Limit, psi, nominal	120,000
Ultimate Tensile Strength, psi	
Wire .005-.015 dia.	140,000-160,000*
Elongation, % in 2"	12 min
Knoop Hardness (100-gram load)	275-340*

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### For More Information

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