

## CMW® ELKONIUM 70 gold based alloy

Category : Metal , Nonferrous Metal , Precious Metal , Gold Alloy

**Material Notes:**

Pure gold has complete resistance to atmospheric tarnish and oxidation. It does not contribute to polymer formations like platinum and palladium alloys. Wrought gold metal is very soft and prone to welding and has very few contact applications. Electroplated coatings of gold on silver and other base metals are used in dry circuit application and to provide long shelf life reliability. Gold is alloyed with other metals to improve hardness, contact performance, and reduce cost. ELKONIUM® 70 is CMW's trademark for a gold-silver-nickel alloy that has sufficient hardness for most contact applications. This alloy is completely resistant to atmospheric tarnish at normal temperature and is used in sensitive switching devices where high reliability for making circuit is required. It has improved resistance to welding and transfer compared to pure gold. Because of its low electrical conductivity and low melting point it is limited to currents under 0.5 amperes. Information provided by CMW Inc.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_CMW-ELKONIUM-70-gold-based-alloy.php](http://www.lookpolymers.com/polymer_CMW-ELKONIUM-70-gold-based-alloy.php)

Physical Properties	Metric	English	Comments
Density	15.6 g/cc	0.564 lb/in <sup>3</sup>	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell 15T	61	61	annealed
	81	81	cold worked
Tensile Strength, Ultimate	228 MPa	33000 psi	annealed
	345 MPa	50000 psi	cold worked

Component Elements Properties	Metric	English	Comments
Gold, Au	72 %	72 %	
Nickel, Ni	1.8 %	1.8 %	
Silver, Ag	26.2 %	26.2 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.0000123 ohm-cm	0.0000123 ohm-cm	14 % IACS

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