

**CMW® ELKONIUM 76 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® 76 is CMW's gold-copper alloy that is completely tarnish resistant at ordinary atmospheric temperatures. Compared to the other CMW gold ELKONIUM alloys, it has improved resistance to welding, and particularly cold welding. When used as a positive contact operating against an ELKONIUM 32 alloy negative contact in low voltage DC applications, the combination resists transfer and sticking at currents up to 4 amperes. Information provided by CMW Inc.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_CMW-ELKONIUM-76-gold-based-alloy.php](http://www.lookpolymers.com/polymer_CMW-ELKONIUM-76-gold-based-alloy.php)

Physical Properties	Metric	English	Comments
Density	17.3 g/cc	0.625 lb/in <sup>3</sup>	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell 15T	76	76	annealed
	91	91	cold worked
Tensile Strength, Ultimate	400 MPa	58000 psi	annealed
	703 MPa	102000 psi	cold worked
Elongation at Break	2.0 %	2.0 %	cold worked
	25 %	25 %	annealed

Component Elements Properties	Metric	English	Comments
Copper, Cu	10 %	10 %	
Gold, Au	90 %	90 %	

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

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