

**CMW® ELKONIUM 42 palladium based alloy**

Category : Metal , Nonferrous Metal , Precious Metal , Palladium Alloy

**Material Notes:**

Palladium belongs to the platinum group of metals and like platinum is highly resistant to atmospheric corrosion; however, it begins to tarnish at temperatures above 400(C. It has a high melting point (1552(C) and, like platinum, resists arc formation. Its low electrical conductivity (16% IACS) limits its application to low current circuits. It costs much less than platinum, and is used as a lower cost alternative. Economics normally dictate that it be supplied as a composite contact with a thin contact metal facing silver brazed to a nickel-plated steel rivet, screw, or projection weld button backing.ELKONIUM® 42 is CMW's trademark for a palladium-silver alloy with the minimum palladium content that provides complete freedom from atmospheric corrosion at normal room temperatures. It is more resistant to metal transfer than pure palladium and its high hardness provides good resistance to mechanical wear. It is economical in many sensitive, low current, AC and DC switching applications.Information provided by CMW Inc.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_CMW-ELKONIUM-42-palladium-based-alloy.php](http://www.lookpolymers.com/polymer_CMW-ELKONIUM-42-palladium-based-alloy.php)

Physical Properties	Metric	English	Comments
Density	11.3 g/cc	0.408 lb/in <sup>3</sup>	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell 15T	65	65	annealed
	91	91	cold worked
Tensile Strength, Ultimate	372 MPa	54000 psi	annealed
	689 MPa	100000 psi	cold worked
Elongation at Break	5.0 %	5.0 %	cold worked
	28 %	28 %	annealed

Component Elements Properties	Metric	English	Comments
Palladium, Pd	60 %	60 %	
Silver, Ag	40 %	40 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.0000430 ohm-cm	0.0000430 ohm-cm	4 % IACS

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