

CMW® ELKONIUM 43 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® 43 is CMW's trademark for a palladium-silver-copper-nickel alloy having high tensile strength and good resistance to mechanical wear. It is more resistant to sulfide tarnish than fine silver but is susceptible to oxidation at high temperatures and under arcing conditions. It is used as a combination spring and contact in sliding Applications such as potentiometers and instrument commutators.Information provided by CMW Inc.

Order this product through the following link:

http://www.lookpolymers.com/polymer_CMW-ELKONIUM-43-palladium-based-alloy.php

Physical Properties	Metric	English	Comments
Density	10.5 g/cc	0.379 lb/in ³	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell 15T	86	86	annealed
	93	93	cold worked
Tensile Strength, Ultimate	538 MPa	78000 psi	annealed
	758 MPa	110000 psi	cold worked
Elongation at Break	3.0 %	3.0 %	cold worked
	22 %	22 %	annealed

Component Elements Properties	Metric	English	Comments
Copper, Cu	12 %	12 %	
Nickel, Ni	5.0 %	5.0 %	
Palladium, Pd	23 %	23 %	
Silver, Ag	60 %	60 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.0000156 ohm-cm	0.0000156 ohm-cm	11 % IACS

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