

CMW® ELKONIUM 41 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® 41 is a palladium-silver-nickel alloy sold by CMW, which is tarnish resistant and considerably harder than pure palladium. It is one of the more economical precious metals and is used in business machines where the contacts operate at high repetitive rates and close with impact. A contact combination very resistant to metal transfer and sticking is obtained when ELKONIUM 41 alloy is operated against a tungsten negative contact,Information provided by CMW Inc.

Order this product through the following link:

http://www.lookpolymers.com/polymer_CMW-ELKONIUM-41-palladium-based-alloy.php

Physical Properties	Metric	English	Comments
Density	11.5 g/cc	0.415 lb/in ³	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell 15T	82	82	annealed
	90	90	cold worked
Tensile Strength, Ultimate	469 MPa	68000 psi	annealed
	689 MPa	100000 psi	cold worked
Elongation at Break	2.0 %	2.0 %	cold worked
	13 %	13 %	annealed

Component Elements Properties	Metric	English	Comments
Nickel, Ni	2.0 %	2.0 %	
Palladium, Pd	72 %	72 %	
Silver, Ag	26 %	26 %	

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

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