

CMW® ELKONIUM 45 Silver Alloy

Category : Metal , Nonferrous Metal , Precious Metal , Silver Alloy

Material Notes:

The alloying of small amounts of one of the precious metals, platinum, palladium or gold with silver increases the hardness, and reduces the metal transfer tendency. These alloys maintain a low contact resistance during operation, as they are not susceptible to oxidation. They are susceptible to sulfide tarnishing however, to about the same degree as fine silver. They are suitable for contacts in sensitive devices in both AC and DC circuits. ELKONIUM® 36, a silver platinum alloy, and ELKONIUM® 45, a silver palladium alloy, both have low contact resistance comparable to fine silver. They are used in DC applications where contact forces are low and fine silver transfers excessively. ELKONIUM® 45 alloy is employed as a negative contact operating against a positive contact material such as ELKONIUM® 17, CMW® D55X (silver-cadmium oxide) or CMW® D510 (silver-nickel) alloys. These combinations are used in low voltage DC applications such as vibrating contact voltage regulators to minimize metal transfer. Information provided by CMW Inc.

Order this product through the following link:

http://www.lookpolymers.com/polymer_CMW-ELKONIUM-45-Silver-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	45	45	annealed
	77	77	cold worked
Tensile Strength, Ultimate	186 MPa	27000 psi	annealed
	331 MPa	48000 psi	cold worked
Elongation at Break	3.0 %	3.0 %	cold worked
	37 %	37 %	annealed

Component Elements Properties	Metric	English	Comments
Palladium, Pd	3.0 %	3.0 %	
Silver, Ag	97 %	97 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.00000300 ohm-cm	0.00000300 ohm-cm	58 % IACS

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