CMW® ELKONIUM 302 platinum based alloy

Category : Metal , Nonferrous Metal , Precious Metal , Platinum Alloy

Material Notes:

Platinum has complete freedom from atmospheric corrosion and is preferred for devices that have low closed forces and where surety of making a circuit may be a problem. It has a high melting point (1769(C) and good resistance to forming arcs. Low electrical conductivity (15% IACS) limits its application to low currents, usually below 5 amperes. Because of the high cost of the platinum ELKONIUM alloys, they are almost always supplied as composite contacts with thin facings of the ELKONIUM metal (silver brazed to nickel plated steel backings in the form of rivets, screws and weld buttons).ELKONIUM® 302 is the trademark used by CMW for an alloy of platinum, palladium and ruthenium. It has characteristics similar to ELKONIUM 34 alloy. It is more economical than platinum-ruthenium alloys because the less expensive palladium metal replaces some of the platinum. Its tarnish resistance is essentially the same as CMW's ELKONIUM 34 alloy. It is used in sensitive low voltage applications. It is also used as a positive contact operating with a tungsten negative contact in DC applications such as voltage regulators and motor speed governorsInformation provided by CMW Inc.

Order this product through the following link:
http://www.lookpolymers.com/polymer_CMW-ELKONIUM-302-platinum-based-alloy.php

Physical Properties	Metric	English	Comments
Density	17.8 g/cc	0.643 lb/in³	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell 15T	90	90	annealed
	92	92	cold worked
Tensile Strength, Ultimate	517 MPa	75000 psi	annealed
	862 MPa	125000 psi	cold worked
Elongation at Break	2.0 %	2.0 %	cold worked
	12 %	12 %	annealed

Component Elements Properties	Metric	English	Comments
Palladium, Pd	18.4 %	18.4 %	
Platinum, Pt	74.4 %	74.4 %	
Ruthenium, Ru	8.2 %	8.2 %	

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

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