

## CMW® ELKONIUM 305 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 34, ELKONIUM 305 and ELKONIUM 306 alloys have lower ruthenium contents and are softer and more ductile. They can be headed into rivets over a limited range. All five alloys have low transfer characteristics and are used in voltage regulators and motor speed governors. They can be used as a positive contact paired with tungsten negative contact for improved transfer resistance. They also have high tarnish resistance and are suitable for many sensitive, low voltage applications. Information provided by CMW Inc.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_CMW-ELKONIUM-305-platinum-based-alloy.php](http://www.lookpolymers.com/polymer_CMW-ELKONIUM-305-platinum-based-alloy.php)

Physical Properties	Metric	English	Comments
Density	20.6 g/cc	0.744 lb/in <sup>3</sup>	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell 15T	84	84	annealed
	89	89	cold worked
Tensile Strength, Ultimate	414 MPa	60000 psi	annealed
	793 MPa	115000 psi	cold worked
Elongation at Break	5.0 %	5.0 %	cold worked
	18 %	18 %	annealed

Component Elements Properties	Metric	English	Comments
Platinum, Pt	95 %	95 %	
Ruthenium, Ru	5.0 %	5.0 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.0000344 ohm-cm	0.0000344 ohm-cm	5 % IACS

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