Palladium Thin Film (Polyester Backing)

Palladium thin film provides conductive, catalytic, and hydrogen?absorbing coatings for sensors, microelectronic circuits, optical systems, and microreactor surfaces requiring rapid response and stable performance. **SKU:** 1000167947-group
Product Code: PD00-MF-000410

Material Properties for Precious Metals

Atomic Properties

Element	Value
Atomic number	46
Crystal structure	Face centred cubic
Electronic structure	Kr 4d¹?
Valences shown	2, 3, 4
Atomic weight(amu)	106.42
Thermal neutron absorption cross-section(Barns)	6
Photo-electric work function(eV)	5
Natural isotope distribution(Mass No./%)	108/ 26.7
Natural isotope distribution(Mass No./%)	110/ 11.8
Natural isotope distribution(Mass No./%)	104/ 11.0
Natural isotope distribution(Mass No./%)	102/ 1.0
Natural isotope distribution(Mass No./%)	105/ 22.2
Natural isotope distribution(Mass No./%)	106/ 27.3
Atomic radius - Goldschmidt(nm)	0.137
Ionisation potential(No./eV)	1/ 8.3
Ionisation potential(No./eV)	2/ 19.4
Ionisation potential(No./eV)	3/ 32.9

Mechanical Properties

Element	Value
Material condition	Soft
Material condition	Hard
Poisson's ratio	0.39
Poisson's ratio	0.39

Element	Value
Bulk modulus(GPa)	187
Bulk modulus(GPa)	187
Tensile modulus(GPa)	121
Tensile modulus(GPa)	121
Hardness - Vickers(kgf mm?²)	40
Hardness - Vickers(kgf mm?²)	100
Tensile strength(MPa)	140-195
Tensile strength(MPa)	325
Yield strength(MPa)	205
Yield strength(MPa)	34.5

Electrical Properties

Element	Value
Electrical resistivity(µOhmcm)	10.8@20
Temperature coefficient(K?¹)	0.0042@0-100
Thermal emf against Pt (cold 0C - hot 100C)(mV)	-0.57

Physical Properties

Element	Value
Boiling point(C)	3140
Density(gcm?³)	12@20°C

Thermal Properties

Element	Value
Melting point(C)	1554
Latent heat of evaporation(J g?¹)	3398
Latent heat of fusion(J g?¹)	157
Specific heat(J K?¹ kg?¹)	244@25
Thermal conductivity(W m?¹ K?¹)	71.8@0-100°C
Coefficient of thermal expansion(x10?? K?¹)	11@0-100