Ruthenium Thin Film Disk (Mylar® Backing)

Ruthenium thin film disk offering catalytic activity, corrosion resistance, and conductivity in a precise circular format. Used in microelectronics, electrocatalysis, optical devices, reference electrodes, and thin?layer electrochemical studies with uniform electrical properties. **SKU:** 1000001503-group
Product Code: RU00-MF-000200

Material Properties for Precious Metals

Atomic Properties

Element	Value
Atomic number	44
Crystal structure	Hexagonal close packed
Electronic structure	Kr 4d? 5s¹
Valences shown	0,1,2,3,4,5,6,7,8
Atomic weight(amu)	101.07
Thermal neutron absorption cross-section(Barns)	3
Photo-electric work function(eV)	4.71
Natural isotope distribution(Mass No./%)	99/ 12.7
Natural isotope distribution(Mass No./%)	96/ 5.5
Natural isotope distribution(Mass No./%)	104/ 18.6
Natural isotope distribution(Mass No./%)	98/ 1.9
Natural isotope distribution(Mass No./%)	101/ 17.1
Natural isotope distribution(Mass No./%)	100/ 12.6
Natural isotope distribution(Mass No./%)	102/ 31.6
Atomic radius - Goldschmidt(nm)	0.134
Ionisation potential(No./eV)	2/ 16.8
Ionisation potential(No./eV)	3/ 28.5
Ionisation potential(No./eV)	1/ 7.36

Mechanical Properties

Element	Value
Material condition	Hard
Material condition	Soft
Poisson's ratio	0.25

Element	Value
Poisson's ratio	0.25
Bulk modulus(GPa)	286
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Tensile modulus(GPa)	432
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Hardness - Vickers(kgf mm?²)	750
Hardness - Vickers(kgf mm?²)	350
Tensile strength(MPa)	495
Yield strength(MPa)	372

Electrical Properties

Element	Value
Electrical resistivity(µOhmcm)	7.7@20°C
Superconductivity critical temperature(K)	0.49
Temperature coefficient(K?¹)	0.0041@0-100

Physical Properties

Element	Value
Boiling point(C)	3900
Density(gcm?³)	12.2@20

Thermal Properties

Element	Value
Melting point(C)	2310
Latent heat of evaporation(J g?¹)	5610
Latent heat of fusion(J g?¹)	252
Specific heat(J K?¹ kg?¹)	238@20°C
Thermal conductivity(W m?¹ K?¹)	117@0-100°C
Coefficient of thermal expansion(x10?? K?¹)	9.6@0-100°C