Rhodium Spooled Wire

Rhodium spooled wire; high tensile strength, wear resistance, and excellent conductivity in a continuous feed. Used for coil winding, connectors, microelectrodes, springs, fine wire bonding, and specialty sensors. **SKU:** 1000015962-group
Product Code: RH00-WR-000110

Material Properties for Precious Metals

Atomic Properties

Element	Value
Atomic number	45
Crystal structure	Face centred cubic
Electronic structure	Kr 4d? $5s^1$
Valences shown	2,3,4,5,6
Atomic weight(amu)	102.9055
Thermal neutron absorption cross-section(Barns)	150
Photo-electric work function(eV)	4.6
Atomic radius - Goldschmidt(nm)	0.134
Ionisation potential(No./eV)	1/ 7.46
Ionisation potential(No./eV)	3/ 31.1
Ionisation potential(No./eV)	2/ 18.1

Mechanical Properties

Element	Value
Material condition	Hard
Material condition	Soft
Poisson's ratio	0.26
Poisson's ratio	0.26
Bulk modulus(GPa)	276
Bulk modulus(GPa)	276
Tensile modulus(GPa)	379
Tensile modulus(GPa)	379
Hardness - Vickers(kgf $mm?^2$)	300
Hardness - Vickers(kgf $mm?^2$)	120

Element	Value
Tensile strength(MPa)	1380-2070
Tensile strength(MPa)	690-760
Yield strength(MPa)	69-275

Electrical Properties

Element	Value
Electrical resistivity(μOhmcm)	4.7@20°C
Temperature coefficient(K?¹)	0.0044@0-100°C
Thermal emf against Pt (cold 0C - hot 100C)(mV)	0.7

Physical Properties

Element	Value
Boiling point(C)	3727
Density(gcm?³)	12.4@20°C

Thermal Properties

Element	Value
Melting point(C)	1965
Latent heat of evaporation(J g?¹)	4800
Latent heat of fusion(J g?¹)	210
Specific heat(J K?¹ kg?¹)	244@25°C
Thermal conductivity(W m?¹ K?¹)	150@0-100°C
Coefficient of thermal expansion(x10?? K?¹)	8.5@0-100°C