Gadolinium Spooled Wire

Gadolinium spooled wire provides continuous rare?earth metal feedstock for magnetic assemblies, alloying, and research prototypes. **SKU:** 1000039037-group
Product Code: GD00-WR-000105

Material Properties for Metals

Atomic Properties

Element	Value
Atomic number	64
Crystal structure	Hexagonal close packed
Electronic structure	Xe 4f? $5d^1$ $6s^2$
Valences shown	3
Atomic weight(amu)	157.25
Thermal neutron absorption cross-section(Barns)	49000
Photo-electric work function(eV)	3.1
Natural isotope distribution(Mass No./%)	160/ 21.8
Natural isotope distribution(Mass No./%)	155/ 14.8
Natural isotope distribution(Mass No./%)	157/ 15.7
Natural isotope distribution(Mass No./%)	152/ 0.2
Natural isotope distribution(Mass No./%)	158/ 24.8
Natural isotope distribution(Mass No./%)	156/ 20.5
Natural isotope distribution(Mass No./%)	154/ 2.2
Atomic radius - Goldschmidt(nm)	0.18
Ionisation potential(No./eV)	2/ 12.1
Ionisation potential(No./eV)	1/ 6.14

Mechanical Properties

Element	Value
Material condition	Polycrystalline
Poisson's ratio	0.26
Bulk modulus(GPa)	39.1
Tensile modulus(GPa)	56.2
Hardness - Vickers(kgf $mm?^2$)	55

Element	Value
Tensile strength(MPa)	193
Yield strength(MPa)	179

Electrical Properties

Element	Value
Electrical resistivity(μOhmcm)	134@20°C
Temperature coefficient(K?¹)	0.00176@0-100°C

Physical Properties

Element	Value
Boiling point(C)	3266
Density(gcm?³)	7.895@25°C

Thermal Properties

Element	Value
Melting point(C)	1313
Latent heat of evaporation(J g?¹)	1920
Latent heat of fusion(J g?¹)	98.7
Specific heat(J K?¹ kg?¹)	230@25°C
Thermal conductivity(W m?¹ K?¹)	10.5@0-100°C
Coefficient of thermal expansion(x10?? K?¹)	6.4@0-100°C