

Erbium Spooled Wire

Formula: Er

Percentage Purity: 99.9%

Product Shape: Spooled

Diameter: 1mm

Length: 0.05m

Temper: Hard

CAS Number: 7440-52-0

UOM Code: 150-997-67

SKU: 1000050834-group

Product Code: ER00-WR-000110

Material Properties for Metals

Atomic Properties

Element	Value
Atomic number	68
Crystal structure	Hexagonal close packed
Electronic structure	Xe 4f ¹² 6s ²
Valences shown	3
Atomic weight(amu)	167.26
Thermal neutron absorption cross-section(Barns)	160
Natural isotope distribution(Mass No./%)	166/ 33.4
Natural isotope distribution(Mass No./%)	162/ 0.1
Natural isotope distribution(Mass No./%)	168/ 27.0
Natural isotope distribution(Mass No./%)	170/ 15.0
Natural isotope distribution(Mass No./%)	167/ 22.9
Natural isotope distribution(Mass No./%)	164/ 1.6
Atomic radius - Goldschmidt(nm)	0.175
Ionisation potential(No./eV)	2/ 11.93
Ionisation potential(No./eV)	1/ 6.10

Mechanical Properties

Element	Value
Material condition	Polycrystalline

Element	Value
Poisson's ratio	0.207
Bulk modulus(GPa)	41.8
Tensile modulus(GPa)	73.3
Hardness - Vickers(kgf mm ²)	70
Tensile strength(MPa)	292
Yield strength(MPa)	292

Electrical Properties

Element	Value
Electrical resistivity(μOhmcm)	86@20@20°C
Temperature coefficient(K ⁻¹)	0.00201@0-100°C

Physical Properties

Element	Value
Boiling point(C)	2863
Density(gcm ³)	9.051@20°C

Thermal Properties

Element	Value
Melting point(C)	1529
Latent heat of evaporation(J g ⁻¹)	1680
Latent heat of fusion(J g ⁻¹)	103
Specific heat(J K ⁻¹ kg ⁻¹)	168@25°C
Thermal conductivity(W m ⁻¹ K ⁻¹)	14.5@0-100°C
Coefficient of thermal expansion($\times 10^{-6}$ K ⁻¹)	9.2@0-100°C