

Cerium Rod

Formula: Ce

Percentage Purity: 99.9%

Diameter: 6.35mm

Length: 50mm

Production Method: Cast

CAS Number: 7440-45-1

UOM Code: 024-355-54

SKU: 1000002877-group

Product Code: CE00-RD-000110

Material Properties for Metals

Atomic Properties

Element	Value
Atomic number	58
Crystal structure	Face centred cubic
Electronic structure	Xe 4f ² 6s ²
Valences shown	3, 4
Atomic weight(amu)	140.12
Thermal neutron absorption cross-section(Barns)	0.73
Photo-electric work function(eV)	2.9
Natural isotope distribution(Mass No./%)	136/ 0.2
Natural isotope distribution(Mass No./%)	140/ 88.4
Natural isotope distribution(Mass No./%)	142/ 11.1
Natural isotope distribution(Mass No./%)	138/ 0.3
Atomic radius - Goldschmidt(nm)	0.182
Ionisation potential(No./eV)	2/ 10.85
Ionisation potential(No./eV)	1/ 5.47
Ionisation potential(No./eV)	3/ 20.20
Ionisation potential(No./eV)	4/ 36.72

Mechanical Properties

Element	Value
Material condition	Polycrystalline

Element	Value
Material condition	Cast
Poisson's ratio	0.248
Poisson's ratio	0.248
Bulk modulus(GPa)	24.4
Bulk modulus(GPa)	24.4
Tensile modulus(GPa)	33.5
Tensile modulus(GPa)	33.5
Hardness - Vickers(kgf mm ²)	25-30
Tensile strength(MPa)	102
Yield strength(MPa)	91

Electrical Properties

Element	Value
Electrical resistivity(μOhmcm)	85.4@20@20°C
Temperature coefficient(K ⁻¹)	0.0087@0-100°C
Thermal emf against Pt (cold 0C - hot 100C)(mV)	1.14

Physical Properties

Element	Value
Boiling point(C)	3426
Density(gcm ³)	6.75@20°C

Thermal Properties

Element	Value
Melting point(C)	799
Latent heat of evaporation(J g ⁻¹)	2680
Latent heat of fusion(J g ⁻¹)	37.3
Specific heat(J K ⁻¹ kg ⁻¹)	205@25°C
Thermal conductivity(W m ⁻¹ K ⁻¹)	11.3@0-100°C
Coefficient of thermal expansion($\times 10^{-6}$ K ⁻¹)	8@0-100°C