

Yttrium Rod

Formula: Y

Percentage Purity: 99%

Diameter: 6.35mm

Length: 50mm

Production Method: Cast

CAS Number: 7440-65-5

UOM Code: 113-013-98

SKU: 1000025562-group

Product Code: Y-00-RD-000110

Material Properties for Metals

Atomic Properties

Element	Value
Atomic number	39
Crystal structure	Hexagonal close packed
Electronic structure	Kr 4d ¹ 5s ²
Valences shown	3
Atomic weight(amu)	88.9059
Thermal neutron absorption cross-section(Barns)	1.3
Photo-electric work function(eV)	3.1
Atomic radius - Goldschmidt(nm)	0.181
Ionisation potential(No./eV)	1/ 6.38
Ionisation potential(No./eV)	Jun-93
Ionisation potential(No./eV)	3/ 20.5
Ionisation potential(No./eV)	2/ 12.2
Ionisation potential(No./eV)	May-77
Ionisation potential(No./eV)	4/ 61.8

Mechanical Properties

Element	Value
Hardness - Brinell	100-140
Hardness - Brinell	30-60
Material condition	Soft

Element	Value
Material condition	Hard
Poisson's ratio	0.265
Poisson's ratio	0.265
Bulk modulus(GPa)	37.3
Bulk modulus(GPa)	37.3
Tensile modulus(GPa)	66.3
Tensile modulus(GPa)	66.3
Izod toughness(J m ²)	24
Tensile strength(MPa)	130
Tensile strength(MPa)	455
Yield strength(MPa)	375
Yield strength(MPa)	57

Electrical Properties

Element	Value
Electrical resistivity(μOhmcm)	53@20@20
Electrical resistivity(μOhmcm)	53@20C
Temperature coefficient(K ⁻¹)	0.00271@0-100
Temperature coefficient(K ⁻¹)	0.00271@0-100C
Thermal emf against Pt (cold 0C - hot 100C)(mV)	0.55

Physical Properties

Element	Value
Boiling point(C)	3338
Density(gcm ³)	4.478@20
Density(gcm ³)	4.478@20C

Thermal Properties

Element	Value
Melting point(C)	1522
Latent heat of evaporation(J g ⁻¹)	4135
Latent heat of fusion(J g ⁻¹)	193
Specific heat(J K ⁻¹ kg ⁻¹)	285@25
Specific heat(J K ⁻¹ kg ⁻¹)	285@25C
Thermal conductivity(W m ⁻¹ K ⁻¹)	17.2@0-100
Thermal conductivity(W m ⁻¹ K ⁻¹)	17.2@0-100C
Coefficient of thermal expansion($\times 10^{-6}$ K ⁻¹)	10.8@0-400
Coefficient of thermal expansion($\times 10^{-6}$ K ⁻¹)	10.8@0-400C