

Ytterbium Powder

Formula: Yb

Percentage Purity: 99.9%

Maximum Particle Size: 500µm

Weight: 10g

CAS Number: 7440-64-4

UOM Code: 075-917-54

SKU: 1000010741-group

Product Code: YB00-PD-000110

Material Properties for Metals

Atomic Properties

Element	Value
Atomic number	70
Crystal structure	Hexagonal close packed
Electronic structure	Xe 4f ¹⁴ 6s ²
Valences shown	2,3
Atomic weight(amu)	173.04
Thermal neutron absorption cross-section(Barns)	37
Natural isotope distribution(Mass No./%)	173/ 16.2
Natural isotope distribution(Mass No./%)	174/ 31.7
Natural isotope distribution(Mass No./%)	172/ 21.9
Natural isotope distribution(Mass No./%)	168/ 0.1
Natural isotope distribution(Mass No./%)	170/ 3.1
Natural isotope distribution(Mass No./%)	171/ 14.3
Natural isotope distribution(Mass No./%)	176/ 12.7
Atomic radius - Goldschmidt(nm)	0.193
Ionisation potential(No./eV)	3/ 25.2
Ionisation potential(No./eV)	2/ 12.2
Ionisation potential(No./eV)	1/ 6.25

Mechanical Properties

Element	Value
Hardness - Brinell	25

Element	Value
Material condition	Polycrystalline
Poisson's ratio	0.28
Bulk modulus(GPa)	13.5
Tensile modulus(GPa)	17.8
Tensile strength(MPa)	68.9
Yield strength(MPa)	65.5

Electrical Properties

Element	Value
Electrical resistivity(μOhmcm)	28@20@20°C
Temperature coefficient(K^{-1})	0.0013@0-100°C

Physical Properties

Element	Value
Boiling point(C)	1194
Density(gcm^{-3})	6.977@20°C

Thermal Properties

Element	Value
Melting point(C)	819
Latent heat of evaporation(J g^{-1})	921
Latent heat of fusion(J g^{-1})	53.2
Specific heat($\text{J K}^{-1} \text{kg}^{-1}$)	145@25°C
Thermal conductivity($\text{W m}^{-1} \text{K}^{-1}$)	32.9@0-100°C
Coefficient of thermal expansion($\times 10^{-6} \text{K}^{-1}$)	25@0-100°C