

Europium Powder

Formula: Eu

Percentage Purity: 99.9%

Maximum Particle Size: 425 μ m

Weight: 1g

CAS Number: 7440-53-1

UOM Code: 493-788-54

SKU: 1000086036-group

Product Code: EU00-PD-000115

Material Properties for Metals

Atomic Properties

Element	Value
Atomic number	63
Crystal structure	Body centred cubic
Electronic structure	Xe 4f ⁷ 6s ²
Valences shown	2, 3
Atomic weight(amu)	151.96
Thermal neutron absorption cross-section(Barns)	4100
Photo-electric work function(eV)	2.5
Natural isotope distribution(Mass No./%)	153/ 52.2
Natural isotope distribution(Mass No./%)	151/ 47.8
Atomic radius - Goldschmidt(nm)	0.204
Ionisation potential(No./eV)	1/ 5.67
Ionisation potential(No./eV)	2/ 11.25

Mechanical Properties

Element	Value
Material condition	Polycrystalline
Poisson's ratio	0.286
Bulk modulus(GPa)	12.1
Tensile modulus(GPa)	14.7
Hardness - Vickers(kgf mm ⁻²)	20

Electrical Properties

Element	Value
Electrical resistivity(μOhmcm)	90.0@25@25°C
Temperature coefficient(K^{-1})	0.0048@0-100°C

Physical Properties

Element	Value
Boiling point(C)	1597
Density(gcm^{-3})	5.243@25°C

Thermal Properties

Element	Value
Melting point(C)	822
Latent heat of evaporation(J g^{-1})	1155
Latent heat of fusion(J g^{-1})	63.4
Specific heat($\text{J K}^{-1} \text{kg}^{-1}$)	176@25°C
Thermal conductivity($\text{W m}^{-1} \text{K}^{-1}$)	13.9@0-100°C
Coefficient of thermal expansion($\times 10^{-6} \text{K}^{-1}$)	32@0-100°C