Samarium Powder

Samarium powder with high surface area and reactivity for magnetic synthesis, catalysis, and alloying. Enables uniform blending, rapid dissolution, and even deposition; applied in SmCo magnets, hydrogenation, and optoelectronic doping. **SKU:** 1000113975-group
Product Code: SM00-PD-000110

Material Properties for Metals

Atomic Properties

Element	Value
Atomic number	62
Crystal structure	Rhombohedral
Electronic structure	Xe 4f? 6s²
Valences shown	2,3
Atomic weight(amu)	150.36
Thermal neutron absorption cross-section(Barns)	5820
Photo-electric work function(eV)	2.7
Natural isotope distribution(Mass No./%)	149/ 13.9
Natural isotope distribution(Mass No./%)	144/ 3.1
Natural isotope distribution(Mass No./%)	148/ 11.3
Natural isotope distribution(Mass No./%)	152/ 26.6
Natural isotope distribution(Mass No./%)	147/ 15.1
Natural isotope distribution(Mass No./%)	150/ 7.4
Natural isotope distribution(Mass No./%)	154/ 22.6
Atomic radius - Goldschmidt(nm)	0.18
Ionisation potential(No./eV)	1/ 5.63
Ionisation potential(No./eV)	2/ 11.07

Mechanical Properties

Element	Value
Material condition	Polycrystalline
Poisson's ratio	0.31
Bulk modulus(GPa)	29.9
Tensile modulus(GPa)	34.1

Element	Value
Tensile strength(MPa)	124
Yield strength(MPa)	110

Electrical Properties

Element	Value
Electrical resistivity(μOhmcm)	92@20°C
Temperature coefficient(K?¹)	0.00148@0-100°C

Physical Properties

Element	Value
Boiling point(C)	1791
Density(gcm?³)	7.536@20°C

Thermal Properties

Element	Value
Melting point(C)	1077
Latent heat of evaporation(J g?¹)	1280
Latent heat of fusion(J g?¹)	72.4
Specific heat(J K?¹ kg?¹)	180@25°C
Thermal conductivity(W m?¹ K?¹)	13.3@0-100°C