

Samarium Disk

Formula: Sm

Percentage Purity: 95%

Temper: As Rolled

Thickness: 0.2mm

Diameter: 15mm

CAS Number: 7440-19-9

UOM Code: 428-391-63

SKU: 1000170104-group

Product Code: SM00-FL-000120

Material Properties for Metals

Atomic Properties

Element	Value
Atomic number	62
Crystal structure	Rhombohedral
Electronic structure	Xe 4f ⁷ 6s ²
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
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Material condition	Polycrystalline
Poisson's ratio	0.31
Bulk modulus(GPa)	29.9
Tensile modulus(GPa)	34.1
Tensile strength(MPa)	124
Yield strength(MPa)	110

Electrical Properties

Element	Value
Electrical resistivity(μOhmcm)	92@20@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($\text{J K}^{-1} \text{kg}^{-1}$)	180@25°C
Thermal conductivity($\text{W m}^{-1} \text{K}^{-1}$)	13.3@0-100°C