

# Samarium Sputtering Target

**Formula:** Sm

**Percentage Purity:** 95%

**Thickness:** 1mm

**Diameter:** 50mm

**CAS Number:** 7440-19-9

**UOM Code:** 379-508-57

**SKU:** 1000155209-group

**Product Code:** SM00-ST-000100

## Material Properties for Metals

### Atomic Properties

Element	Value
Atomic number	62
Crystal structure	Rhombohedral
Electronic structure	Xe 4f <sup>7</sup> 6s <sup>2</sup>
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

<b>Element</b>	<b>Value</b>
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**

<b>Element</b>	<b>Value</b>
Electrical resistivity( $\mu\text{Ohmcm}$ )	92@20@20°C
Temperature coefficient( $\text{K}^{-1}$ )	0.00148@0-100°C

## **Physical Properties**

<b>Element</b>	<b>Value</b>
Boiling point( C )	1791
Density( $\text{gcm}^{-3}$ )	7.536@20°C

## **Thermal Properties**

<b>Element</b>	<b>Value</b>
Melting point( C )	1077
Latent heat of evaporation( $\text{J g}^{-1}$ )	1280
Latent heat of fusion( $\text{J g}^{-1}$ )	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