

# Antimony Rod

**Formula:** Sb

**Percentage Purity:** 99.999%

**Diameter:** 4.7mm

**Length:** 50mm

**CAS Number:** 7440-36-0

**UOM Code:** 017-711-18

**SKU:** 1000002148-group

**Product Code:** SB00-RD-000106

## Material Properties for Metals

### Atomic Properties

Element	Value
Atomic number	51
Crystal structure	Rhombohedral
Electronic structure	Kr 4d <sup>10</sup> 5s <sup>2</sup> 5p <sup>3</sup>
Valences shown	-3,0,3,5
Atomic weight( amu )	121.75
Thermal neutron absorption cross-section( Barns )	5
Photo-electric work function( eV )	4.1
Natural isotope distribution( Mass No./% )	121/ 57.3
Natural isotope distribution( Mass No./% )	123/ 42.7
Atomic radius - Goldschmidt( nm )	0.161
Ionisation potential( No./eV )	1/ 8.64
Ionisation potential( No./eV )	3/ 25.3
Ionisation potential( No./eV )	2/ 16.53
Ionisation potential( No./eV )	5/ 56.0
Ionisation potential( No./eV )	4/ 44.2
Ionisation potential( No./eV )	6/ 108

### Mechanical Properties

Element	Value
Hardness - Mohs	3-3.3
Material condition	Polycrystalline

Element	Value
Poisson's ratio	0.25-0.33
Bulk modulus( GPa )	42
Tensile modulus( GPa )	54.7

## Electrical Properties

Element	Value
Electrical resistivity( $\mu\text{Ohmcm}$ )	40.1@20@20°C
Temperature coefficient( $\text{K}^{-1}$ )	0.0051@0-100°C
Thermal emf against Pt (cold 0C - hot 100C)( mV )	4.89

## Physical Properties

Element	Value
Boiling point( C )	1750
Density( $\text{gcm}^{-3}$ )	6.68@20

## Thermal Properties

Element	Value
Melting point( C )	630.7
Latent heat of evaporation( $\text{J g}^{-1}$ )	1370
Latent heat of fusion( $\text{J g}^{-1}$ )	163
Specific heat( $\text{J K}^{-1} \text{kg}^{-1}$ )	205@25°C
Thermal conductivity( $\text{W m}^{-1} \text{K}^{-1}$ )	24.4@0-100°C
Coefficient of thermal expansion( $\times 10^{-6} \text{K}^{-1}$ )	9@0-100°C