

# Hafnium Foil (Light Tight)

**Formula:** Hf

**Percentage Purity:** 97%

**Thickness:** 0.009mm

**Length 1:** 50mm

**Length 2:** 50mm

**CAS Number:** 7440-58-6

**UOM Code:** 003-632-82

**SKU:** 1000000474-group

**Product Code:** HF00-FL-000150

## Material Properties for Metals

### Atomic Properties

Element	Value
Atomic number	72
Crystal structure	Hexagonal close packed
Electronic structure	Xe 4f <sup>14</sup> 5d <sup>2</sup> 6s <sup>2</sup>
Valences shown	4
Atomic weight( amu )	178.49
Thermal neutron absorption cross-section( Barns )	103
Photo-electric work function( eV )	3.9
Natural isotope distribution( Mass No./% )	179/ 13.8
Natural isotope distribution( Mass No./% )	176/ 5.2
Natural isotope distribution( Mass No./% )	180/ 35.2
Natural isotope distribution( Mass No./% )	174/ 0.2
Natural isotope distribution( Mass No./% )	177/ 18.5
Natural isotope distribution( Mass No./% )	178/ 27.1
Atomic radius - Goldschmidt( nm )	0.159
Ionisation potential( No./eV )	3/ 23.3
Ionisation potential( No./eV )	1/ 7.0
Ionisation potential( No./eV )	2/ 14.9
Ionisation potential( No./eV )	4/ 33.3

### Mechanical Properties

<b>Element</b>	<b>Value</b>
Material condition	Hard
Material condition	Soft
Poisson's ratio	0.26
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Bulk modulus( GPa )	109
Bulk modulus( GPa )	109
Tensile modulus( GPa )	141
Tensile modulus( GPa )	141
Hardness - Vickers( kgf mm <sup>2</sup> )	150-180
Tensile strength( MPa )	445
Tensile strength( MPa )	745
Yield strength( MPa )	365
Yield strength( MPa )	240

## **Electrical Properties**

<b>Element</b>	<b>Value</b>
Electrical resistivity( $\mu\text{Ohmcm}$ )	32.2@20@20°C
Superconductivity critical temperature( K )	0.128
Temperature coefficient( K <sup>-1</sup> )	0.0044@0-100°C

## **Physical Properties**

<b>Element</b>	<b>Value</b>
Boiling point( C )	4602
Density( gcm <sup>3</sup> )	13.1@20°C

## **Thermal Properties**

<b>Element</b>	<b>Value</b>
Melting point( C )	2227
Latent heat of evaporation( J g <sup>-1</sup> )	3700
Latent heat of fusion( J g <sup>-1</sup> )	122
Specific heat( J K <sup>-1</sup> kg <sup>-1</sup> )	146@25°C
Thermal conductivity( W m <sup>-1</sup> K <sup>-1</sup> )	23@0-100°C
Coefficient of thermal expansion( $\times 10^{-6}$ K <sup>-1</sup> )	6@0-100°C