

# Hot-pressed Silicon Nitride Sputtering Target

**Formula:** Si<sub>3</sub>N<sub>4</sub>

**Thickness:** 6mm

**Diameter:** 50.8mm

**Production Method:** Hot Pressed

**UOM Code:** 020-043-09

**SKU:** 1000002381-group

**Product Code:** SJ61-ST-000200

## Material Properties for Ceramics

### Chemical Resistance

Element	Value
Acids - concentrated	Fair
Acids - dilute	Good
Alkalis	Good-Poor
Halogens	Good
Metals	Fair

### Electrical Properties

Element	Value
Dielectric constant	10
Volume resistivity( Ohmcm )	10 <sup>12</sup> -10 <sup>17</sup> @25

### Physical Properties

Element	Value
Apparent porosity( % )	0
Density( gcm <sup>-3</sup> )	3.11

### Thermal Properties

Element	Value
Sublimation point( C )	1900
Upper continuous use temperature( C )	1100-1650

<b>Element</b>	<b>Value</b>
Specific heat( J K <sup>-1</sup> kg <sup>-1</sup> )	680-800@25°C
Thermal conductivity( W m <sup>-1</sup> K <sup>-1</sup> )	15-43@20°C
Coefficient of thermal expansion( x10 <sup>-6</sup> K <sup>-1</sup> )	3.3@20-1000°C

## **Mechanical Properties**

<b>Element</b>	<b>Value</b>
Tensile modulus( GPa )	280-310
Hardness - Vickers( kgf mm <sup>-2</sup> )	1700-2200
Shear strength( MPa )	480-960
Tensile strength( MPa )	400-580

## **Pultrusions**

<b>Element</b>	<b>Value</b>
Compressive strength( MPa )	2000-3500