

# Inconel® 718 Rod

**Formula:** Ni53/Fe19/Cr19/Nb/Mo/Ti

**Diameter:** 12.7mm

**Length:** 200mm

**Temper:** Annealed

**UOM Code:** 051-413-26

**SKU:** 1000007303-group

**Product Code:** NI13-RD-000125

## Material Properties for Alloys

### Mechanical Properties

Element	Value
Hardness - Brinell	250-410
Elongation at break( % )	15
Modulus of elasticity( GPa )	200
Tensile strength( MPa )	800-1360

### Magnetic Properties

Element	Value
Initial permeability	1.0013
Curie temperature( C )	-196

### Electrical Properties

Element	Value
Electrical resistivity( $\mu\text{Ohmcm}$ )	125

### Thermal Properties

Element	Value
Maximum use temperature in air( C )	700
Melting point( C )	1260-1335
Specific heat( J K <sup>-1</sup> kg <sup>-1</sup> )	435@23°C
Thermal conductivity( W m <sup>-1</sup> K <sup>-1</sup> )	11.2@23°C

<b>Element</b>	<b>Value</b>
Coefficient of thermal expansion( $\times 10^{-6} \text{ K}^{-1}$ )	13@20-100°C

## **Physical Properties**

<b>Element</b>	<b>Value</b>
Density( $\text{gcm}^{-3}$ )	8.19