

# Inconel® 718 Disk

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

**Temper:** Annealed

**Thickness:** 0.25mm

**Diameter:** 25mm

**UOM Code:** 001-524-91

**SKU:** 1000000187-group

**Product Code:** NI13-FL-000100

## 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         |