

# Polyimide T1 Thermocouple Insulated Wire (Ni90/Cr10)

**Formula:** Ni90/Cr10  
**Conductor Diameter:** 0.025mm  
**Insulation:** Polyimide  
**Insulation Thickness:** 0.004mm  
**Length:** 5m  
**Product Shape:** Thermocouple (May Be Used As One Component)  
**UOM Code:** 064-339-83  
**SKU:** 1000009027-group  
**Product Code:** NI09-SW-000115

## Material Properties for Alloys

### Mechanical Properties

Element	Value
Elongation at break( % )	44
Modulus of elasticity( GPa )	186
Izod impact strength( J m <sup>2</sup> )	108
Tensile strength( MPa )	620-780

### Electrical Properties

Element	Value
Electrical resistivity( $\mu\text{Ohmcm}$ )	70.6
Temperature coefficient( K <sup>-1</sup> )	0.00032

### Thermal Properties

Element	Value
Maximum use temperature in air( C )	1100
Melting point( C )	1420
Thermal conductivity( W m <sup>-1</sup> K <sup>-1</sup> )	19@23°C
Coefficient of thermal expansion( $\times 10^{-6}$ K <sup>-1</sup> )	17.2@20-1000°C

## Physical Properties

Element	Value
Density( gcm <sup>3</sup> )	8.5