

# T1 Thermocouple Alloy Powder (Ni90/Cr10)

**Formula:** Ni90/Cr10

**Maximum Particle Size:** 20 $\mu$ m

**Weight:** 1000g

**Production Method:** Atomised

**UOM Code:** 116-129-83

**SKU:** 1000028136-group

**Product Code:** NI09-PD-000101

## Material Properties for Alloys

### Mechanical Properties

Element	Value
Elongation at break( % )	44
Modulus of elasticity( GPa )	186
Izod impact strength( J m <sup>21</sup> )	108
Tensile strength( MPa )	620-780

### Electrical Properties

Element	Value
Electrical resistivity( $\mu$ Ohmcm )	70.6
Temperature coefficient( K <sup>21</sup> )	0.00032

### Thermal Properties

Element	Value
Maximum use temperature in air( C )	1100
Melting point( C )	1420
Thermal conductivity( W m <sup>21</sup> K <sup>21</sup> )	19@23°C
Coefficient of thermal expansion( x10 <sup>??</sup> K <sup>21</sup> )	17.2@20-1000°C

### Physical Properties

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