

# T2 Thermocouple Alloy Powder (Ni95/(Al+Mn+Si) 5)

**Formula:** Ni95/(Al+Mn+Si) 5  
**Maximum Particle Size:** 10 $\mu$ m  
**Weight:** 1g  
**Production Method:** Atomised  
**UOM Code:** 025-199-62  
**SKU:** 1000002977-group  
**Product Code:** NI10-PD-000100

## Material Properties for Alloys

### Magnetic Properties

Element	Value
Maximum permeability	1.07

### Mechanical Properties

Element	Value
Elongation at break( % )	44
Modulus of elasticity( GPa )	220
Izod impact strength( J m <sup>-1</sup> )	108
Tensile strength( MPa )	550-780

### Electrical Properties

Element	Value
Electrical resistivity( $\mu$ Ohmcm )	29-33
Temperature coefficient( K <sup>-1</sup> )	0.0019

### Thermal Properties

Element	Value
Maximum use temperature in air( C )	1100
Melting point( C )	1315-1390

<b>Element</b>	<b>Value</b>
Specific heat( J K <sup>-1</sup> kg <sup>-1</sup> )	446@23°C
Thermal conductivity( W m <sup>-1</sup> K <sup>-1</sup> )	30-32@23°C
Coefficient of thermal expansion( x10 <sup>-6</sup> K <sup>-1</sup> )	16.8@20-1000°C

## **Physical Properties**

<b>Element</b>	<b>Value</b>
Density( gcm <sup>-3</sup> )	8.5-8.7