

## Nickel 205

Nickel 205 is a high purity commercial Nickel. The main characteristic of Nickel 205 is its ability to withstand relatively high temperatures without deterioration.

Nickel 205 is available in sizes down to 0.07 mm.

### Physical and Mechanical Properties

	Units	
Maximum continuous operating temperature in air	°C	600
Nominal composition	%	Ni > 99.5 Mn 0.3 max Fe 0.2 max Mg 0.05 max Cu 0.1 max C 0.02 max
Density at 20°C	g/cm <sup>3</sup>	8.9
Resistivity at 20°C	μΩcm	8.75
Temperature Coefficient of Resistance, 20 – 100°C	1/K	0.0045
Coefficient of thermal expansion, 20 – 300°C	1/K	14.3 x 10 <sup>-6</sup>
Thermal conductivity at 20°C	W/mK	71
Specific heat capacity at 20°C	kJ/kgK	0.456
Melting point (approx.)	°C	1452
Tensile strength R <sub>m</sub> , 0.5 mm wire – annealed	N/mm <sup>2</sup>	350
Tensile Strength, 0.5 mm wire – fully cold worked	N/mm <sup>2</sup>	700
Tensile Strength, 0.1 mm wire – fully cold worked	N/mm <sup>2</sup>	1050
Elongation at break, 0.5 mm wire - annealed	%	> 25
Elongation at break – fully cold worked	%	2

The figures given in this table represent nominal or typical values.

*Information contained within this technical data sheet is based upon the general experience of IMI Scott Ltd and is believed to be correct at the time of issue. No warranty is given or is to be implied from the details above. Customers are advised to carry out independent tests in order to determine the suitability of any IMI Scott Ltd product for an application.*