

# NICKEL® 270



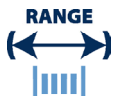
## Key Features

High purity grade of nickel that is made by powder metallurgy

### IMPORTANT

We will manufacture to your required mechanical properties.

## key advantages to you, *our customer*



**RANGE**  
0.025mm to 21mm  
(.001" to .827")



Order 3m to 3t  
(10 ft to 6000 Lbs)



Delivery:  
within 3 weeks



Wire to your spec



E.M.S available



Technical support

### NICKEL® 270 available in:-

- Round wire
- Bars or lengths
- Flat wire
- Shaped wire
- Rope/Strand

### Packaging

- Coils
- Spools
- Bars or lengths



\*Trade name of Special Metals Group of Companies.

# NICKEL<sup>®</sup> 270



Chemical Composition			Specifications	Key Features	Typical Applications
Element	Min %	Max %	-   <b>Designations</b> W.Nr. 2.4050 UNS N02270 AWS 074	High purity grade of nickel that is made by powder metallurgy	Electrical Resistance Thermometers Components for hydrogen thyratrons Electrical and electronic components
Ni + Co	99.9	-			
Cu	-	0.01			
Fe	-	0.05			
Mn	-	0.003			
C	-	0.05			
S	-	0.003			
Mg	-	0.005			
Si	-	0.005			
Ti	-	0.005			

<b>Density</b>	8.89 g/cm <sup>3</sup>	0.321 lb/in <sup>3</sup>
<b>Melting Point</b>	1454 °C	2650 °F
<b>Coefficient of Expansion</b>	13.3 µm/m °C (20 – 100 °C)	7.4 x 10 <sup>-6</sup> in/in °F (70 – 212 °F)
<b>Modulus of Rigidity</b>	82 kN/mm <sup>2</sup>	11893 ksi
<b>Modulus of Elasticity</b>	207 kN/mm <sup>2</sup>	30000 ksi

Electrical Resistivity	
7.5 µΩ · cm	45 ohm · circ mil/ft

Thermal Conductivity	
86 W/m · °C	595 btu · in/ft <sup>2</sup> · h · °F

Properties			
Condition	Approx. tensile strength		Approx. operating temperature
	N/mm <sup>2</sup>	ksi	
Annealed	<450	<65	Tensile strength and elongation drop significantly at temperatures above 315 °C (600 °F). Service temperature is dependent on environment, load and size range.
Hard Drawn	600 – 800	87 – 116	

The above tensile strength ranges are typical. If you require different please ask.