

NICKEL[®] 270

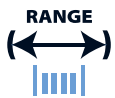
Key Features

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*



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.

| Chemical Composition | | | Specifications | Key Features | Typical Applications |
|----------------------|-------|-------|-----------------------------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| Element | Min % | Max % | - Designations 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 | | | |

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

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

| Thermal Conductivity | |
|----------------------|---------------------------------------|
| 86 W/m · °C | 595 btu · in/ft ² · h · °F |

| Properties | | | |
|------------|--------------------------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Condition | Approx. tensile strength | | Approx. operating temperature |
| | N/mm ² | ksi | |
| Annealed | 300 – 450 | 44 – 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.