

NICKEL[®] 212



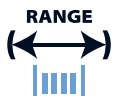
Key Features

Stronger than Nickel 200 due to the addition of manganese

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[®] 212 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. 2.41 10 AWS 073 UNS N02212	Stronger than Nickel 200 due to the addition of manganese	Electrical Lead Wires Supporting components in Lamps and electronic valves Electrodes in Glow-discharge Lamps Sparking Contacts
Ni + Co	97.0	-			
Mn	1.50	2.50			
Fe	-	0.25			
C	-	0.10			
Cu	-	0.20			
Si	-	0.20			
Mg	-	0.20			
S	-	0.006			

Density	8.86 g/cm ³	0.320 lb/in ³
Melting Point	1446 °C	2635 °F
Coefficient of Expansion	12.9 µm/m °C (20 – 100 °C)	7.2 x 10 ⁻⁶ in/in °F (70 – 212 °F)
Modulus of Rigidity	78 kN/mm ²	11313 ksi
Modulus of Elasticity	196 kN/mm ²	28400 ksi

Electrical Resistivity	
10.9 µΩ · cm	66 ohm · circ mil/ft

Thermal Conductivity	
44 W/m · °C	305 btu · in/ft ² · h · °F

Properties			
Condition	Approx. tensile strength		Approx. operating temperature
	N/mm ²	ksi	
Annealed	450 – 550	65 – 80	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	750 – 950	109 – 138	

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