

NICKEL[®] 212



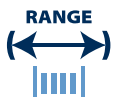
Key Features

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. 2.4110 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.