alloy wire®
international

# NICKEL® 212

> **Key Features**
>
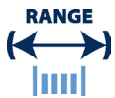> **Stronger than Nickel 200 due to the addition of manganese**

**IMPORTANT**
We will manufacture to your required mechanical properties.

## key advantages to you, *our customer*

**RANGE**

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

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

**DELIVERY**
**3 WEEKS**

Delivery:
within 3 weeks

Wire to your spec

E.M.S available

HOW CAN I HELP?

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.

Manufacturing quality, delivering reliability | **alloywire.com**

| Chemical Composition | | | Specifications | Key Features | Typical Applications |
|---|---|---|---|---|---|
| Element | Min % | Max % | - | Stronger than Nickel 200 due to the addition of manganese | Electrical Lead Wires |
| Ni + Co | 97.0 | - | | | Supporting components in Lamps and electronic valves |
| Mn | 1.50 | 2.50 | | | Electrodes in Glow-discharge Lamps |
| Fe | - | 0.25 | **Designations** | | Sparking Contacts |
| C | - | 0.10 | W.Nr. 2.4110 | | |
| Cu | - | 0.20 | AWS 073 | | |
| Si | - | 0.20 | UNS N02212 | | |
| Mg | - | 0.20 | | | |
| S | - | 0.006 | | | |

| | | |
|---|---|---|
| **Density** | 8.86 g/cm³ | 0.320 lb/in³ |
| **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/mm² | 11313 ksi |
| **Modulus of Elasticity** | 196 kN/mm² | 28400 ksi |

| Electrical Resistivity | |
|---|---|
| 10.9 µΩ • cm | 66 ohm • circ mil/ft |

| Thermal Conductivity | |
|---|---|
| 44 W/m • °C | 305 btu • in/ft² • h • °F |

| Properties | | | |
|---|---|---|---|
| Condition | Approx. tensile strength | | Approx. operating temperature |
| | N/mm² | ksi | |
| Annealed | <500 | <73 | 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.**