

NILO[®] 52

Key Features

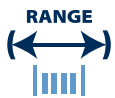
Designed for use with a variety of soft glasses

Almost constant coefficient of thermal expansion up to approx. 565 °C (1050 °F)

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

NILO[®] 52 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 % | ASTM F30 | Designed for use with a variety of soft glasses Almost constant coefficient of thermal expansion up to approx. 565 °C (1050 °F) | Various glass to metal sealing applications with soft glass and ceramics |
| Ni | 50.50 nominal | | | | |
| Fe | BAL | | Designations | | |
| Mn | - | 0.60 | W.Nr. 2.4478 UNS N14052 AWS 093 | | |
| Si | - | 0.30 | | | |
| C | - | 0.05 | | | |
| Cr | - | 0.25 | | | |
| P | - | 0.025 | | | |
| S | - | 0.03 | | | |
| Al | - | 0.10 | | | |

| | | |
|---------------------------------|----------------------------|---|
| Density | 8.3 g/cm ³ | 0.300 lb/in ³ |
| Melting Point | 1450 °C | 2640 °F |
| Inflection Point | 500 °C | 930 °F |
| Thermal Conductivity | 17 W/m•°C | 118 btu•in/ft ² •h °F |
| Coefficient of Expansion | 10.3 µm/m °C (20 – 100 °C) | 5.7 x 10 ⁻⁶ in/in °F (70 – 212 °F) |

Heat Treatment of Finished Parts

*The Nilo alloys are usually supplied and used in the annealed condition (residual cold work distorts the coefficients of thermal expansion).
Annealing times may vary due to section thickness.*

| Type | Temperature | | Time (Hr) | Cooling |
|--------|-------------|-------------|-----------|--------------|
| | °C | °F | | |
| Anneal | 850 – 1000 | 1560 – 1830 | 0.5 | Air or water |

Properties

| Condition | Approx. tensile strength | | Approx. operating temperature | |
|------------|--------------------------|-----------|-------------------------------|------------|
| | N/mm ² | ksi | °C | °F |
| Annealed | <600 | <87 | up to +450 | up to +840 |
| Hard Drawn | 700 – 900 | 102 – 131 | up to +450 | up to +840 |

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