

Cold Rolled Strip



N42 is an iron-nickel controlled expansion alloy suitable to glass sealing, with optimal chemical composition to obtain hermetic seals. Typical applications are integrated circuit lead frames, electron gun components, enamelled resistor ferrules and moulds for composite parts.

International standards

ASTM F30 - DIN 17745 – W 1.3917 - A54-301 - SEW 385

Chemical composition %weight

	Ni	Fe
Typical value	42	Bal

Standard Delivery & dimensions available

Form	Thickness	Width	Length	Temper
Strip - Sheet	0.10 to 3.50 mm	10 to 640 mm	500 to 3500mm	Annealed / Hard

Physical properties

Density (g/cm ³)	Resistivity at 0°C (μohm.cm)	Melting T° (°C)	Curie T° (°C)	Specific heat (J/g °C)	Thermal conductivity at 20°C (W/m/°C)
8.15	63	1425	330	0.50	12.5
		30 to 300°C	30 to 450°C		
Average linear CTE (10-6/°C)		4.0 to 4.7	6.7 to 7.4		

Mechanical properties (Typical values)

	Hardness Hv	Ultimate strength (MPa)	Yield strength (MPa)	Elongation %	Young modulus KN/mm ²
Annealed	140	500	300	30	145
Hard	210	650	620	5	

The data enclosed in this document are only given as indicative values and correspond to our standard product. Different specific requirements are subject to discussion and formal approval by Aperam Alloys Imphy. For further information or special request, please contact us.

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