

Cold Rolled Strip

supermimphy t

1. Description, standards & chemical

SUPERMIMPHY T is nickel-iron soft magnetic alloy with very high permeability and high purity suitable for toroidal cores (e.g. wound strip used in Earth Leakage Circuit Breakers) and high performance current transformer cores

International standards

DIN 17405, IEC 404, JIS C 2531

Chemical composition (%weight)

	Ni	Mo	Fe
Typical value	80	5	Bal

2. Physical properties

Density (g/cm ³)	Melting T° (°C - °F)	Curie T° (°C - °F)	Thermal expansion (10 ⁻⁶ .°K ⁻¹)	Resistivity (μΩcm)	Thermal conduction (W/°Km)	Specific heat (J.Kg ⁻¹ .°K ⁻¹)
8.7	1450 - 2642	420 - 788	12	60	19	460

3. Magnetic properties *

Conditions	Thickness (mm - ")	Permeability (at 5 mOe ≈ 0.4 A/m)	Maximum permeability
AC 50Hz	0.070 - 0.00276	315000	430000

* Typical values measured on wound cores 30 x 20 x 20 x th. 0.07mm / 0.000276" after heat treatment at 1170°C / 2138°F in pure & dry Hydrogen after proper cooling plus baking at optimum temperature

4. Mechanical properties *

Temper	Hardness (HV)	Grain size	Tensile strength (MPa - KSI)	Yield strength (MPa - KSI)	Elongation (%)	Young's modulus (MPa - KSI)
Hard	320	-	-	-	-	-

* Typical values for material to be tested in accordance with NF EN 10002, NF EN ISO 6507, NFA 04102

5. Standard Delivery & dimensions available

Form	Thickness * (mm / ")	Width (mm / ")	Temper
Coil	0.05 to 0.35 / .00197 to .0138	10 to 300 / .394 to 11.81	Hard

* 0.07mm / 0.00275" thickness is commonly produced

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.