

Cold Rolled Strip



1. Description, standards & chemical

SATIMPHY is an iron-nickel soft magnetic alloy suitable for tape wound cores used in residual current devices, transformers...

Chemical composition (%weight)

	Ni	Fe
Typical value	56	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)
8.3	1445 - 2633	530 - 986	10,7	45	16,5	-

3. Magnetic properties *

Conditions	Thickness (mm - ")	Permeability (at 5 mOe ≈ 0.4 A/m)	Maximum permeability
AC 50Hz	0.080 - 0.00315	70000	140000

* Typical values measured on wound cores 30 x 20 x 10 x th. 0.08mm / 0.00315" after heat treatment at 1170°C / 2138°F in pure & dry Hydrogen after proper cooling plus baking at optimum temperature in magnetic field

4. Mechanical properties *

Temper	Hardness (HV)	Grain size	Tensile strength (MPa - KSI)	Yield strength (MPa - KSI)	Elongation (%)	Young's modulus (MPa - KSI)
Hard	260	-	-	-	-	-

* 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 0.10 / .00197 to .00394	10 to 300 / .394 to 11.81	Hard

* 0.08mm / 0.00315" 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.