

Cold Rolled Strip



1. Description, standards & chemical

SUPRA 510 is an iron-nickel-chromium soft magnetic alloy suitable for stepper motor stators for watch industry.

International standards

IEC 404

Chemical composition (% weight)

	Ni	Cr	Fe
Typical value	50	10	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)
8.2	-	230 - 446	10,5	100	-	-

3. Magnetic properties *

Conditions	Thickness (mm - ")	Saturation induction (G - T at 10 Oe ≈ 800 A/m)	Coercive force (Oe - A/m)	Permeability
DC	0.34 - 0.0134	7500 - 0.75	0.035 - 2.8	40 000

* Typical values measured on rings sample th. 0.34mm / 0.0134" after heat treatment at 1150°C / 2102°F in pure & dry Hydrogen after proper cooling

4. Mechanical properties

Temper	Hardness (HV)	Grain size	Tensile strength (MPa - KSI)	Yield strength (MPa - KSI)	Elongation (%)	Young's modulus (MPa - KSI)
Hard	230	-	800 - 116	-	3	-

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 / ")	Length (mm / ")	Temper
Coil - Sheet *	0.3-0.7 / .012- .0276	10-640 / .4-25.2	500-3500 / 19.7-137.8	Hard

* Depending on thickness, width or diameter & temper

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