

Cold Rolled Strip



1. Description, standards & chemical

AFK1 is an iron-Cobalt soft magnetic alloy suitable for compact generators and motor laminations.

International standards

ASTM A 801, IEC404

Chemical composition (% weight)

	Co	Cr	Mn	Fe
Typical value	27	0,5	0,3	Bal

2. Physical properties

Density (g/cm ³)	Resistivity (μ Ω.cm)	CTE 0-100°C	Curie T°C	Saturation Induction Bs (G)
8	20	10.3	980	24 000

3. Magnetic DC properties

	Hc (Oe)	B at 100e	B at 250e	B at 1000e	B at 2000e
2h at 760°C	2.50	≥ 14 700	≥ 17 300	≥ 20 200	≥ 21 900
3h at 850°C	1.20	≥ 14 700	≥ 17 300	≥ 20 200	≥ 21 900

All values declared are typical values measured on rings 36x25mm of 0.34mm material thickness after:

- 2h @ 760°C, cooling 250°C/h under pure and dry hydrogen
- 3h @ 850°C, cooling 250°C/h under pure and dry hydrogen

4. Mechanical properties (typical values)

	Hardness HV	Ultimate strength (MPa)	Yield strength (MPa)	Elongation %
Hard	300	1 000	900	2
2h at 760°C	-	600	350	17
3h at 850°C	-	510	250	13

5. Standard delivery & dimensions available

Form	Thickness	Width	Length	Temper
Strip - Sheet	0.10 to 3.5 mm	10 to 320 mm	500 to 3 500 mm	Hard

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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