

Magfield 80

Magfield 80 is a nickel-iron soft-magnetic alloy with Ni content about 80%, additionally alloyed upto 6% of Mo. Magfield 80 is characterized by highest permeability and very low coercive force.

Applications: memory cores, transformers, transducers, chokes, laminations, shielding, relay parts, stepping motors, toroidal strip wound cores, etc.

1. Chemical composition

Nominal composition, %	C	P	S	Mn	Si	Mo	Fe	Ni
min	-	-	-	-	-	4.80	11.00	Bal.
max	0.03	0.02	0.02	0.60	0.30	6.00	17.00	

2. Mechanical properties

Condition	Yield Strength, $R_{p0.2}$ (MPa)	Tensile Strength, R_m (MPa)	Hardness, HV	Elongation, A (%)
soft, annealed	300	750	150	≥ 40

3. Magnetic properties

Saturation Bs, T	0.70	Initial permeability $\mu_{0.80}$, mH/m	≥ 50.00
Coercivity Hc, A/m	≤ 1.20	Maximum permeability μ_{max} , mH/m	≥ 225.00

4. Physical properties

Density, g/cm ³	8.75	Coefficient of thermal expansion, $10^{-6}/K$	100°C	12.00
Electrical resistivity at 20°C, Ω mm ² /m	0.56		200°C	12.80
Thermal conductivity at 20°C, W/mk	17.00		300°C	13.00
Melting point, °C	1450		400°C	13.50
Curie point, °C	400		500°C	14.20

5. Delivery form, dimensions, condition.

Form*	Thickness, mm	Width, mm	Length, mm	Finish
Strip/Coil	0.10-2.50	10.00 - 400.00	-	soft annealed / hard
Sheet	0.50-3.50	5.00 - 400.00	500.00 - 3500.00	soft annealed / hard

*Other dimensions and specifications upon request.

Note: All information enclosed in this datasheet is based on our best knowledge and is given as indicative. Other special requirements are subject to prior discussion and approval of Vojay. Please contact us for any additional information or request.