Magfield 75

Nickel-Iron Soft-Magnetic Alloy

W.N.: 2.4501
DIN: NiFe16CuCr
UNS: N14076

Magfield 75

Magfield 75 is a nickel-iron soft-magnetic alloy with Ni content about 75%, additionally alloyed by Cr and Cu.

Magfield 75 is characterized by extremely high permeability and low coercivity.

Applications: relay, rotor and stator laminations, magnetic valves, shielding, gas safety, watches, sensors, transformers, transducers, memory cores, magnetic switches, chokes, etc.

1. Chemical composition

Nominal composition, %	C	P	S	Mn	Si	Cr	Cu	Fe	Ni
min	-	-	-	-	-	1.80	4.80	15.00	Bal.
max	0.03	0.02	0.02	0.60	0.30	2.20	5.20	18.00	

2. Mechanical properties

Condition	Yield Strength, $R_{p0.2}$ (MPa)	Tensile Strength, R_m (MPa)	Hardness, HV	Elongation, A (%)
soft, annealed	290	600	150	≥ 40

3. Magnetic properties

Saturation Bs, T	0.75
Coercivity Hc, A/m	≤1.40

Initial permeability $\mu_{0.80}$,mH/m	≥31.80
Maximum permeability μ_{max},mH/m	≥225.00

4. Physical properties

Density, g/cm^3	8.60
Electrical resistivity at 20°C, Ω mm^2/m	0.55
Thermal conductivity at 20°C, W/mk	17.00
Melting point, °C	1450
Curie point, °C	400

Coefficient of thermal expansion, 10^{-6}/K	100°C	12.10
	200°C	-
	300°C	-
	400°C	-
	500°C	-

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 anneled / 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.