

Mu85

Mu85 is a soft magnetic alloy containing 80% nickel, 5% moly and balance iron, saturation induction of approx. 0.7 T, the highest technically obtainable permeability, and a very low coercive force.

Mu85 is widely used in the radio electronics industry, precision instrumentation, remote control and automatic control systems

Common Trade Names

Magnifer 7904, Alloy 4, NiFe15Mo

Chemical Composition

Grade	C%	P%	S%	Mn%	Si%	Cu%	Ni%	Mo%
Mu85	Max 0.03	Max 0.02	Max 0.02	0.30-0.60	0.15-0.30	Max 0.20	79.0-81.0	4.8-5.2

Physical Properties

Properties	
Resistivity at 20°C (micro ohm · meter)	0.55
Density (gram/cm ³)	8.70
Curie Temp °C	410
Thermal conductivity (W/cm K)	0.32
Mean coefficient of thermal expansion (20 –100 °C) 10-6/K	12

Typical Mechanical Properties

Condition	Tensile Strength MPa	Yield Strength MPa	Elongation %
Soft Annealed	630	260	40
Cold rolled	1000	900	4

DC Magnetic Properties

Form	Width or Diameter	Permeability (0.08A/m) μ 0.08	Maximum Permeability μ m	Coercive Force Hc	Saturation Induction Bs
	mm	mH/m	mH/m	A/m	T
		\geq	\geq	\leq	\geq
Strip/Sheet	0.005-0.01	20	87.5	4.8	0.7
	0.02-0.04	22.5	100	3.6	0.7
	0.05-0.09	35	138	2.4	0.7
	0.10-0.19	37.5	188	1.6	0.7
	0.20-0.34	50	225	1.2	0.7
	0.35-1.00	62.5	313	0.8	0.7
	1.10-2.50	50	188	1.2	0.7
Plate	3-22mm	37.5	125	1.6	0.7
Rod/Bar	8-100	37.5	125	1.6	0.7

Magnetizing Curve

Table on the left: 0.05mm thickness, on the right: 0.1mm thickness

