

Designations and standards

Standard	Material designation
Material No.	2.4501
DIN designation	NiFe16CuCr
DIN standard	17745
	EN 60404-8-6 : E1
UNS	N14076
ASTM	A753

Chemical composition (weight - %) acc. to DIN 17745

	Ni	Cr	Fe	C	Mn	Si	Cu	Mo	Al	Others
Min.		1.5	15.0				4.0	-	-	-
Max.	bal.	2.5	18.0	0.05	1.0	0.3	6.0	-	-	-

Mechanical values (N/mm², %)

	R _{p 0.2}	R _m	A ₅₀	HV
50% cold worked	800	860	5	270
Deep-drawing	290	600	40	150

Magnetic properties

Quality class	Permeability (min.)		Coercivity
	μ ₄	μ _{max}	
ME 4	40.000	115.000	-
ME 6	60.000	140.000	-
ME8	80.000	175.000	-
MH 2	-	-	≤ 2

Saturation induction (T)	Curie temperature (°C)	Saturation magnetostriction (10 ⁻⁶)
0.8	400	+1

Strip thickness ≈ 0.2 mm

Physical properties at room temperature

Density	(g/cm ³)	8.6
Specific heat	(J/kgK)	460
Thermal conductivity	(W/mK)	17
Resistivity	(Ωmm ² /m)	55
Modulus of electricity	(kN/mm ²)	-
Expansion coefficient from 20°C to	(10 ⁻⁶ /K)	12.5

Processing

Melting point	(°C)	≈1.450
Formability		good
Weldability		good

Material characteristics

High permeability, low coercive force.

Typical applications

Transducers, transformer, residual current circuit breakers, relay and shielding components, toroidal strip wound cores

Legal notice

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