

VDM[®] MAG 53

Designations and standards

Standard	Material designation
Material No.	2.4420
DIN designation	NiFe 44
DIN standard	17745 EN 60404-8-6 : E2
UNS	

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

	Ni	Cr	Fe	C	Mn	Si	Cu	Mo	Al	Others
Min.	bal.	-	42,0				-	-		-
Max.		-	46,0	0.05	0.5	0.3	-	-	0.005	-

Mechanical values (N/mm², %)

	R _{p 0.2}	R _m	A ₅₀	HV
50% cold worked	-	-	-	-
Deep-drawing	-	-	-	-

Magnetic properties

Quality class	Permeability (min.)		Coercivity
	μ ₄	μ _{max}	
MG 40	40.000	100.000	2
MD 60	60.000	130.000	1.2

Saturation induction (T)	Curie temperature (°C)	Saturation magnetostriction (10 ⁻⁶)
1.5	530	+25

Strip thickness 0.1 mm

Physical properties at room temperature

Density	(g/cm ³)	8.3				
Specific heat	(J/kgK)	500				
Thermal conductivity	(W/mK)	16.5				
Resistivity	(Ωmm ² /m)	0.45				
Modulus of electricity	(kN/mm ²)	-				
Expansion coefficient from 20°C to		100	200	300	400	500
	(10 ⁻⁶ /K)	10.6	10.6	10.7	10.7	10.8

Processing

Melting point	(°C)	1.445
Formability		good
Weldability		-

Material characteristics

High permeability, high saturation induction.

Typical applications

Transducers, transformer, residual current circuit breakers, toroidal strip wound cores for special applications

Legal notice

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