

Designations and standards

Standard	Material designation	
Material No.	1.3910	1.3911
DIN designation	Ni 36	RNi 24
DIN standard	17745	17405/17745
	EN 60404-8-6 : E4	
UNS	K93600	

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

	Ni	Cr	Fe	C	Mn	Si	Cu	Mo	Al	Others
Min.	35.0		bal.							
Max.	38.0	-		0.05	1.0	0.3	-	-	0.02	0.01

Mechanical values (N/mm², %)

	R _{p 0.2}	R _m	A ₅₀	HV
50% cold worked	600	630	5	200
Deep-drawing	290	≥ 440	30	140

Magnetic properties

Quality class	Permeability (min.)			Coercivity
	μ ₄	μ ₁₆	μ _{max}	
MD 1		2.000 +/- 200	-	-
MD 1a		2.300 +/- 200	-	-
MD 3		2.900	20.000	≤16
MD 5	5000		25.000	≤12

Saturation induction (T)	Curie temperature (°C)	Saturation magnetostriction (10 ⁻⁶)
1,3	250	+20

Strip thickness 0.3 mm

Physical properties at room temperature

Density	(g/cm ³)	8.1				
Specific heat	(J/kgK)	515				
Thermal conductivity	(W/mK)	12.5				
Electrical resistivity	(Ωmm ² /m)	0.75				
Modulus of elasticity	(kN/mm ²)	140				
Expansion coefficient from 20°C to		100	200	300	400	500
	(10 ⁻⁶ /K)	1.2	2.2	5.5	8.2	10.0

Processing

Melting point	(°C)	1.450
Formability		good
Weldability		good

Material characteristics

High resistivity, good permeability with low hysteresis losses at high frequencies.

Typical applications

Transformer, transducers, residual current circuit breakers, relay and shielding components

Legal notice

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