



Characteristics and scope of application

- This material possesses the highest saturation magnetisation of all iron-nickel alloys, combined with a high magnetic permeability.
- The delivery condition of W48 is usually annealed, but highest magnetic performance is only achieved after a suitable final annealing step.

Standard designations

- DN designation W48
- Alloy number / UNS 1.3922 / -
- Norms DIN 17745
- Typical chemical composition Ni 48%, Fe 52%

Physical properties

Density	Temperature liquidus line	Inflection temperature	Electrical resistivity	Coercivity	Mean coefficient of thermal expansion
lb/in ³	°F	°F	Ohm CMF	Hc [A/m]	10 ⁻⁶ /°F 68 to 752°F
0.30	2633	824	271	< 12	4.7

Mechanical properties

Ultimate tensile strength	Yield strength	Elongation
ksi	ksi	%
74*	41*	40*

* soft annealed