

1. Standards

DIN 1.3926
UNS K95000

3. Composition

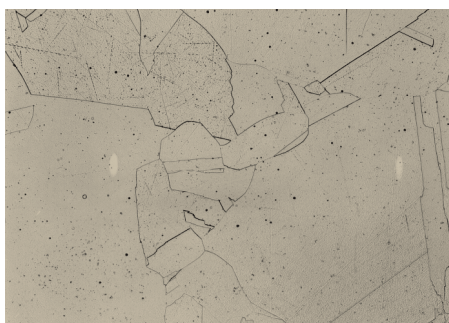
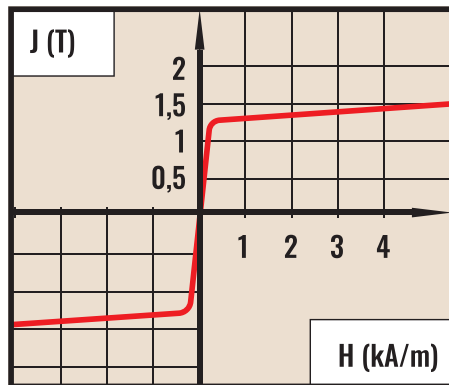
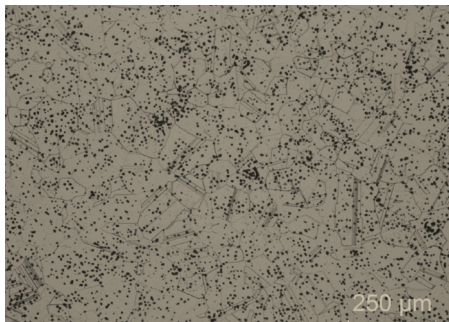
⁽¹⁾ Combustion analysis under EN ISO 9556 specification.
⁽²⁾ Microprobe analysis

% C ⁽¹⁾	< 0,01
% Ni ⁽²⁾	49,5-50,5
% Fe	Compl.

4. Microstructure

Monophase homogeneous structure
Grain size G= 3 (~ 125 μm) ⁽³⁾

⁽³⁾ according to NF A 04 102



2. Properties and use

Iron nickel alloy prepared from an iron carbonyl powder using a master batch technology. This soft magnetic material is used for application needing a very low coercive field. This material is not resistant to corrosion.

5. Physical and chemical properties

Minimum density : 7,6

6. magnetic properties

Coercive field < 0,1 A/cm for $\rho = 7,80$
Residual induction = 0,8 T for $\rho = 7,80$
Maximum polarization = 1,35 T for H = 4 kA/m and $\rho = 7,80$
Permeability = 27270 for $\rho = 7,80$

7. Mechanical properties

Traction

$R_m \geq 400$ MPa
 $R_{p0,2} \geq 150$ MPa

Roughness : Ra < 1 μm
Hardness : 100-140 Hv₁
A% > 20 %

8. HIP special

For some application needing a super low coercitive field, HIP treatment can be applied in order to reduce porosities and enhance magnetic properties.

Grain size G = 1 (~ 600 μm)
Minimum density : 8,10
Coercive field : 0,025 A/cm