



1J50

1. Brief introduction:

It's Ni-Fe soft magnetic alloy with high magnetic permeability, high saturation magnetic induction.

Mainly used for transformers, relays, electromagnetic clutch cores working in medium magnetic fields.

2. Chemical composition under GBn198-88 standard:

Grade	chemical composition,%							
	C	P	S	Cu	Mn	Si	Ni	Fe
	MAX							
1J50	0.03	0.02	0.02	0.2	0.3~0.6	0.15~0.3	49.5~50.5	Remainder

Remarks: If require adjustments for some chemical compositions, pls consult with us.

3. Physical and mechanical properties under GBn198-88 standard:

Grade	Resistivity ($\mu\Omega\cdot m$)	Density (g/cm ³)	Curie Point °C	High Saturated magneto-stricti on coefficient $\lambda_{10}/10^{-6}$	Brinell hardness		Tensile strength Rm		Yield strength Rp		Elongation A %	
					HBS		N/mm ²		0.2 N/mm ²			
					cold-drawn &hard	soft	cold-drawn& hard	soft	cold-drawn &hard	soft	cold-drawn& hard	soft
1J50	0.45	8.2	500	25	170	130	785	450	685	150	3	37



4. Typical average linear expansion coefficient value α ,10-6/°C:

Grade	20°C~100°C	20°C~200°C	20°C~300°C	20°C~400°C	20°C~500°C	20°C~600°C	20°C~700°C	20°C~800°C	20°C~900°C
1J50	8.9	9.2	9.2	9.2	9.4	-	-	-	-

5. Main product types:

wire,rod, bar,strip, plate/sheet.

6. Kovar Source URL:

<https://www.hitealloy.com/product/1j50.html>