



## 1J79

### 1. Brief introduction:

It's Nickel-Iron soft magnetic alloy with high initial magnetic permeability.

Used as transformers, mutual inductor, magnetic amplifiers, choke cores and magnetic shields operating in weak magnetic fields.

### 2. Chemical composition under GB198-88 standard:

Grade	chemical composition, %								
	C	P	S	Cu	Mn	Si	Ni	Mo	Fe
	MAX								
1J79	0.03	0.02	0.02	0.2	0.6~1.1	0.3~0.5	78.5~80	3.8~4.1	Remainder

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

### 3. Physical and mechanical properties under GB198-88 standard:

Grade	Resistivity ( $\mu\Omega\cdot m$ )	Density (g/cm <sup>3</sup> )	Curie Point °C	High Saturated magneto-striction coefficient $\lambda\theta/10^{-6}$	Brinell hardness		Tensile strength Rm		Yield strength Rp 0.2		Elongation A %	
					HBS		N/mm <sup>2</sup>		N/mm <sup>2</sup>			
					cold-drawn &hard	soft	cold-drawn &hard	soft	cold-drawn &hard	soft	cold-drawn &hard	soft
1J79	0.55	8.6	450	2	210	120	1030	560	980	150	3	50



**4. Typical average linear expansion coefficient value  $\alpha_{10-6}/^{\circ}\text{C}$ :**

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
1J79	10.3~10.8	10.9~11.2	11.3~12.9	11.9~12.5	12.3~13.2	12.7~13.4	13.1~13.6	13.4~13.6	13.2~13.8

**5. Main product types:**

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

**6. Main product types:**

1J79, Ni79Mo4, permalloy 80, 79HM.

**7. Kovar Source URL:**

<https://www.hitealloy.com/product/1j79.html>