Precision Alloy Ni29Co18 Iron Nickel Cobalt 4J29/4J33/4J45/Invar36/FeNi50 alloy Wire

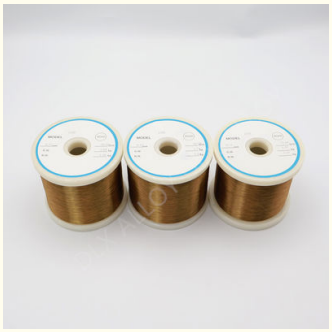
Our Product Introduction

Basic Information

- Place of Origin: China
- Brand Name: Victory
- Model Number: Permalloy 80
- Minimum Order Quantity: 50
- Price: $25-$40
- Packaging Details: Standard Export Wooden Cases Ex.Gross Weight Under 20kg=Carton Box/Gross Weight over 20 kg=Plywood Box Or as per Request
- Delivery Time: 5-21 days
- Payment Terms: L/C, T/T, Western Union, MoneyGram
- Supply Ability: 200 tons per month

Product Specification

- Material: NiFe
- Certificate: ISO9001
- Shape: Wire, Strip, Foil, Sheet
- Resistivity: 0.56
- Density: 8.75g/cm3
- Size: Customized
- Standard: GB/ASTM/AISI/ASME
- Condition: Bright, Annealed, Soft
- Application: Industrial Magnet
- Curie Point: 400
- HCR: 30
- Feature: High Initial Permeability
- Highlight: **Soft Magnetic Precision Alloy**, **High Permeability Precision Alloy**, **Bright nife**



Our Product Introduction

Product Description

High Permeability Soft Magnetic Alloy

Permalloy 80 is a type of alloy that is made up of nickel, iron, and molybdenum. It is a highly magnetic material that is commonly used as a magnetic core material in electrical and electronic equipment. This particular alloy has a composition of approximately 80% nickel, 15% iron, and 5% molybdenum. Compared to ordinary steel, commercial permalloy alloys have a relative permeability of around 100,000. This means that it provides maximum magnetic permeabilities and minimal core losses at low field strengths.

One of the most significant advantages of permalloy 80 is its small size and weight. This makes it an ideal material for use in magnetic core and shielding applications where space is limited. Additionally, this vacuum-melted product has near-zero magnetostriction and significant anisotropic magnetoresistance.

Permalloy 80 offers high initial and maximum permeabilities with low coercive force, low hysteresis loss, low eddy-current losses, and low magnetostriction. These properties are critical for industrial applications, especially in thin films where variable stresses would otherwise cause a large destructive variation in magnetic properties.

Overall, permalloy 80 is a versatile and reliable material that finds wide application in the electrical and electronic industries. Its unique magnetic properties make it an essential component in many applications where precise control of magnetic fields is required. It is particularly useful in situations where space is at a premium, as its small size and weight allow it to be used in tight spaces without sacrificing performance. Its low coercive force, hysteresis loss, eddy-current losses, and magnetostriction make it an ideal material for use in thin films where variable stresses can cause significant variations in magnetic properties. In short, permalloy 80 is a high-performance material that is an excellent choice for many industrial applications.

Applications

High sensitivity and small power transformers, magnetic amplifiers, relays, chokes, magnetic heads for magnetic recording devices, magnetic shields, various tape wound cores, cut cores, and laminated cores used in weak magnetic fields.

Material	C	P	S	Mn	Si	Ni	Cr	Co	Mo	Cu
	Max									
Permalloy80	0.03	0.020	0.020	0.3-0.6	0.15-0.30	79.0-81.0	-	-	4.8-5.2	≤0.2

rial	Shape	Class	Thickness or Diameter mm	Magnetic permeability in 0.08A/m magnetic field intensity μ0.4(mH/m)	Maximum permeability μm(mH/m)	Coercivity(under saturation magnetic induction)Hc/A·m-1
				not less than		no greater than
Permalloy80	Cold rolled strip		0.03-0.04	18000(22.5)	80000(100)	3.6
			0.05-0.09	28000(35)	110000(137.5)	2.4
			0.10-0.19	30000(37.5)	150000(187.5)	1.6
			0.20-0.34	40000(50)	180000(225)	1.2
			0.35-1.00	50000(62.5)	250000(312.5)	0.8
			1.10-2.50	40000(50)	150000(187.5)	1.2
			0.03-0.04	30000(37.5)	110000(137.5)	2.4
			0.05-0.09	40000(50)	140000(175)	1.6
			0.10-0.19	50000(62.5)	180000(225)	1.2
			0.20-0.34	60000(75)	200000(250)	1.0
			0.35	55040(68.8)	260000(325)	0.7
	Hot rolled tape		4.5-20	30000(37.5)	100000(125)	1.6
	Hot forged bar		20-100	30000(37.5)	100000(125)	1.6

Material	Shape	Class	Thickness or Diameter mm	Magnetic permeability in 0.08A/m magnetic field intensity μ0.4(mH/m)	Maximum permeability μm(mH/m)	Coercivity(under saturation magnetic induction)Hc/A·m-1	Saturation magnetic induction Bs/T
				not less than		no greater than	

Permalloy 80	Cold rolled strip		0.03-0.04	18000(22.5)	80000(100)	3.6	0.70
			0.05-0.09	28000(35)	110000(137.5)	2.4	0.70
			0.10-0.19	30000(37.5)	150000(187.5)	1.6	0.70
			0.20-0.34	40000(50)	180000(225)	1.2	0.70
			0.35-1.00	50000(62.5)	250000(312.5)	0.8	0.70
			1.10-2.50	40000(50)	150000(187.5)	1.2	0.70
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			0.10-0.19	50000(62.5)	180000(225)	1.2	0.70
			0.20-0.34	60000(75)	200000(250)	1.0	0.70
			0.35	55040(68.8)	260000(325)	0.7	0.70
	Hot rolled tape		4.5-20	30000(37.5)	100000(125)	1.6	0.70
	Hot forged bar		20-100	30000(37.5)	100000(125)	1.6	0.70

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