



Annealed Soft Magnetic Alloy

Our Product Introduction

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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°C
- HCR: 30
- Feature: High Initial Permeability
- Highlight: Annealed Soft Magnetic Alloy, AISI Soft Magnetic Alloy, ASTM soft iron alloy



Product Description

High Permeability Soft Magnetic Alloy

Our Product Introduction

Permalloy 80 is a highly magnetic nickel-iron-molybdenum alloy, with roughly 80% nickel and 15% iron and 5% molybdenum content. It's useful as a magnetic core material in electrical and electronic equipment. Commercial permalloy alloys typically have relative permeability of around 100,000, compared to several thousand for ordinary steel. It provides maximum magnetic permeabilities and minimal core losses at low field strengths. This vacuum-melted product also offers the advantages of small size and weight in magnetic core and shielding materials for the applications shown below. Other magnetic properties are near zero magnetostriction, and significant anisotropic magnetoresistance.



Permalloy 80 provides high initial and maximum permeabilities with low coercive force, low hysteresis loss, low eddy-current losses, and low magnetostriction, which is critical for industrial applications, allowing it to be used in thin films where variable stresses would otherwise cause a large destructive variation in magnetic properties.

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

Material	Shape	Class	Thickness or Diameter mm	Magnetic permeability in 0.08A/m magnetic field intensity $\mu 0.4(\text{mH/m})$	Maximum permeability $\mu\text{m}(\text{mH/m})$	Coercivity(under saturation magnetic induction) $H_c/A\cdot m^{-1}$
				not less than		no greater than
Permalloy80	Cold rolled strip	I	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
		II	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 $\mu 0.4(\text{mH/m})$	Maximum permeability $\mu\text{m}(\text{mH/m})$	Coercivity(under saturation magnetic induction) $H_c/A\cdot m^{-1}$	Saturation magnetic induction B_s/T
				not less than		no greater than	
Permalloy 80	Cold rolled strip	I	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
		II	0.03-0.04	30000(37.5)	110000(137.5)	2.4	0.70
			0.05-0.09	40000(50)	140000(175)	1.6	0.70
			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
	H o t r o l l e d t a p e		4.5-20	30000(37.5)	100000(125)	1.6	0.70
	H o t f o r g e d b a r		20-100	30000(37.5)	100000(125)	1.6	0.70



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