

## **WWWSINONEO.COM**





















### **ABOUT NEODYMIUM MAGNETS**



10 Years Experiece 100% Quality Guarantee OEM Service

Competi tive Pricing As a rare earth permanent <u>magnetic material</u>, Nd-Fe-B has high magnetic energy product, coercive force and high energy density with good mechanical property, and it is the strongest permanent magnet in the world, so it has been the widely used in modern industry and electronic technology.

We devote ourselves to the research and development of <u>sintered NdFeB magnets</u> since the company' s establishment. With the abundant experiences and stable technical craft, we can produce highly precise and intricately shaped sintered NdFeB magnet with different shape such as block, ring, segment and some other shapes required by customers.

In addition, there are different kinds of coatings such as electroplating Zn, NiCuNi, NiSn, phosphate coating, chemical plating coating, electrophoresis epoxy coating can be chose.

Magnet products with high Hcj, high (BH)max, low temperature coefficient, low weight loss can be used in different fields such as machinery, video & audio, communication, medical appliance, OA, magnetic separator and so on.





### **GRADE OF NEODYMIUM MAGNETS**

N35, N38, N42, N38SH...what does it all mean? Neodymium magnets are all graded by the material they are made of. As a very general rule, the higher the grade (the number following the 'N'), the stronger the magnet.

The highest grade of neodymium magnet currently available is N52. Any letter following the grade refers to the temperature rating of the magnet. If there are no letters following the grade, then the magnet is standard temperature neodymium.

The temperature ratings are standard (no designation) - M - H - SH - UH - EH. You find the temperature rating of each grade on our Specifications of Neodymium Magnets Page.

The grade, or "N rating" of the magnet refers to the Maximum Energy Product of the material that the magnet is made from. It refers to the maximum strength that the material can be magnetized to.

The grade of neodymium magnets is generally measured in units millions of Gauss Oersted (MGOe). A magnet of grade N38 has a Maximum Energy Product of 38 MGOe. Generally speaking, the higher the grade, the stronger the magnet.



10 Years
Experiece

100% Quality Guarantee OEM Service

Competi tive Pricing



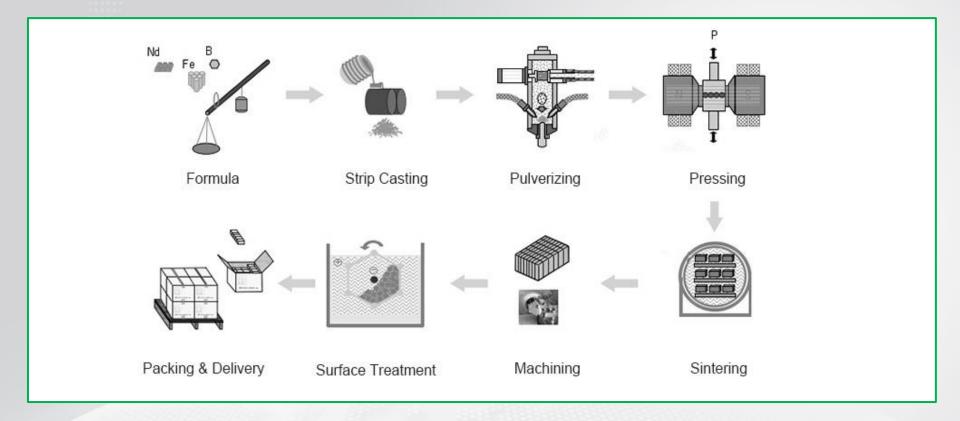
#### **MAKING PROCESS OF NEODYMIUM MAGNETS**



NdFeB magnet use Powder Metallurgy Process, proportion of material such as: neodymium, dysprosium, iron, cobalt, niobium, praseodymium, aluminum, iron, and boron etc., through Mid-frequency Induction Furnace smelting to alloy steel

ingot, then broken into power of 3~5um, and forming mold in magnetic field, the green bodies sintering dense and tempering in Vacuum Sintering Furnace, that can earn magnetic properties of blank of permanent magnet.

After grinding, drilling, cutting and other processing, last via surface finish, it is good NdFeB magnet.





### APPLICATION OF NEODYMIUM MAGNETS









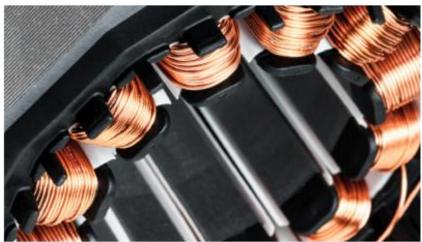
automotive motors

aviation

compressors



wind power generation



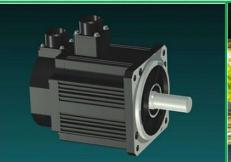
all kinds of electronic products



### APPLICATION OF NEODYMIUM MAGNETS













Elevator motor



servo motor











Magnetic bar medical devices medical devices and IT



# MAGNETIC PROPERTIES



Grade	Remanence		Magnetic Inductio		Intrinsic Coercivity		Max Magnetic Energy Product			duct	Maximum Working Temperature≤		
	Br ( KG) Br (T)		P- (T)		Hel (KOs)	H-1 (MA ()	(BH)max(MGOe)		(BH)max(KJ/m³)				
			Hcb (KOe) Hcb (KA/m)		Hcj (KOe)	Hcj (KA/m)	Max Min		Max Min		°C		
N35	≥11.8	≥1.18	≥10.8	≥860	≥12	≥960	37	33	295	263			
N38	≥12.3	≥1.23	≥10.8	≥860	≥12	≥960	39	36	310	287			
N40	≥12.7	≥1.27	≥11.0	≥876	≥12	≥960	41	38	327	302		≤80	
N42	≥13.0	≥1.30	≥11.0	≥876	≥12	≥960	43	40	343	320			
N45	≥13.3	≥1.33	≥11.0	≥876	≥12	≥960	46	42	366	335	N		
N48	≥13.7	≥1.37	≥10.5	≥836	≥12	≥960	49	45	390	358			
N50	≥14.0	≥1.40	≥10.5	≥836	≥12	≥960	51	47	406	374			
N52	≥14.2	≥1.42	≥10.5	≥836	≥12	≥960	53	49	422	390			
N54	≥14.4	≥1.44	≥10.5	≥836	≥11	≥876	55	51	438	406			
N35M	≥11.8	≥1.18	≥10.8	≥860	≥14	≥1114	37	33	295	263		≤100	
N38M	≥12.3	≥1.23	≥11.0	≥876	≥14	≥1114	39	36	310	287			
N40M	≥12.7	≥1.27	≥11.5	≥915	≥14	≥1114	41	38	327	302			
N42M	≥13.0	≥1.30	≥11.8	≥939	≥14	≥1114	43	40	343	320			
N45M	≥13.3	≥1.33	≥12.0	≥956	≥14	≥1114	46	42	366	335	M		
N48M	≥13.7	≥1.37	≥12.2	≥972	≥14	≥1114	49	45	390	358			
N50M	≥14.0	≥1.40	≥12.5	≥995	≥14	≥1114	51	47	406	374			
N52M	≥14.2	≥1.42	≥12.5	≥995	≥14	≥1114	53	49	422	390			
N33H	≥11.4	≥1.14	≥10.6	≥844	≥17	≥1350	35	31	279	247			
N35H	≥11.8	≥1.18	≥10.8	≥860	≥17	≥1350	37	33	295	263			
N38H	≥12.3	≥1.23	≥11.0	≥876	≥17	≥1350	39	36	310	287			
N40H	≥12.7	≥1.27	≥11.5	≥916	≥17	≥1350	41	38	327	302			
N42H	≥13.0	≥1.30	≥11.8	≥940	≥17	≥1350	43	40	343	320	н	≤120	
N45H	≥13.3	≥1.33	≥12.0	≥955	≥17	≥1350	46	42	366	335			
N48H	≥13.6	≥1.36	≥12.2	≥971	≥17	≥1350	49	45	390	358			
N50H	≥14	≥1.4	≥12.5	≥995	≥17	≥1350	51	47	406	374			
N52H	≥14.3	≥1.43	≥12.5	≥995	≥17	≥1350	53	49	422	390			



# MAGNETIC PROPERTIES



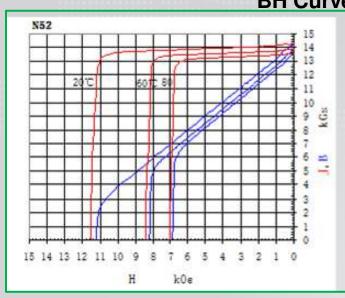
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N33SH	≥11.4	≥1.14	≥10.6	≥844	≥20	≥1592	35	31	279	247		
N35SH	≥11.8	≥1.18	≥10.8	≥860	≥20	≥1592	37	33	295	263		≤150
N38SH	≥12.3	≥1.23	≥11.0	≥876	≥20	≥1592	39	36	310	287		
N40SH	≥12.6	≥1.26	≥11.5	≥916	≥20	≥1592	41	38	327	302	SH	
N42SH	≥12.9	≥1.29	≥11.8	≥940	≥20	≥1592	43	40	343	320	SII	
N45SH	≥13.2	≥1.32	≥12.0	≥955	≥20	≥1592	46	42	366	335		
N48SH	≥13.6	≥1.36	≥12.2	≥971	≥20	≥1592	49	45	390	358		
N50SH	≥14	≥1.4	≥12.5	≥995	≥20	≥1592	51	47	406	374		
N33UH	≥11.4	≥1.14	≥10.6	≥844	≥25	≥1990	35	31	279	247		≤180
N35UH	≥11.8	≥1.18	≥10.8	≥860	≥25	≥1990	37	33	295	263		
N38UH	≥12.3	≥1.23	≥11.0	≥876	≥25	≥1990	39	36	310	287		
N40UH	≥12.6	≥1.26	≥11.5	≥916	≥25	≥1990	41	38	327	302	UH	
N42UH	≥12.9	≥1.29	≥11.8	≥940	≥25	≥1990	43	40	343	320		
N45UH	≥13.2	≥1.32	≥12.0	≥955	≥25	≥1990	46	42	366	335		
N48UH	≥13.6	≥1.36	≥12.2	≥971	≥25	≥1990	49	45	390	358		
N28EH	≥10.4	≥1.04	≥9.50	≥756	≥30	≥2388	30	26	239	207		
N30EH	≥10.8	≥1.08	≥9.50	≥756	≥30	≥2388	32	28	255	223		
N33EH	≥11.4	≥1.14	≥10.6	≥844	≥30	≥2388	35	31	279	247		
N35EH	≥11.8	≥1.18	≥10.8	≥860	≥30	≥2388	37	33	295	263	EH	≤200
N38EH	≥12.3	≥1.23	≥11.0	≥876	≥30	≥2388	39	36	310	287	En	5200
N40EH	≥12.6	≥1.26	≥11.5	≥916	≥30	≥2388	41	38	327	302		
N42EH	≥12.9	≥1.29	≥11.8	≥940	≥30	≥2388	43	41	343	320		
N45EH	≥13.2	≥1.32	≥12.0	≥955	≥30	≥2388	46	42	366	335		
N30TH	≥10.8	≥1.08	≥9.50	≥756	≥35	≥2786	32	28	255	223		
N33TH	≥11.4	≥1.14	≥10.6	≥844	≥35	≥2786	35	31	279	247	TH	≤220
N35TH	≥11.8	≥1.18	≥11.0	≥876	≥35	≥2786	37	33	295	263	111	2220
N38TH	≥12.2	≥1.22	≥11.0	≥876	≥33	≥2627	39	36	310	287		

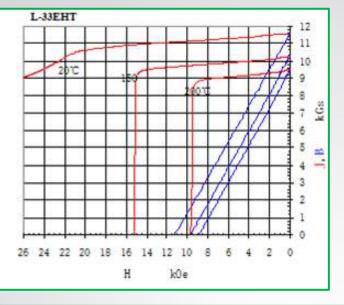


### **MAGNET PHYSICAL PROPERTIES**



### **BH Curve**





Temp.Coeff.of Br	-0.11%/ °C	Temp.Coeff.of Hc	-0.60%/ °C
Density	7.3-7.5g/cm 3	Electrical Resistivity	114 .cm
Vickers Hardness	600Hv	Flexural Resistivity	25kg/mm
Tensile Strength	8.0Kg/mm2	Coeff. Of Thermal Expansion	4X10 -6 / °C
Specific Heat	0.12Kcal/Kg	Thermal Conductivity	7.7kcal/[m.h. °C
Young is Modulus	1.6X10[11]N/m2	Rigidity	0.64N/m2
Poisson; s Ratio	0.24	Compressibility	9.8x10-12m2/N
Curie Temperature	310-340 °C		



### SIZE OF NEODYMIUM MAGNETS



Size	Outer Diameter/Length	Inner diameter/Width	Thickness	
Maximum	150mm		50.00mm	
Minimum	1mm		0.50mm	
Maximum	100mm	100mm	50.00mm	
Minimum	0.5mm	0.50mm	0.50mm	
Maximum	150mm	140mm	50.00mm	
Minimum	1.00mm	0.60mm	0.50mm	
Segment, Arc and	d other irregular shapes can b	e made according to custome	r's samples or drawing.	



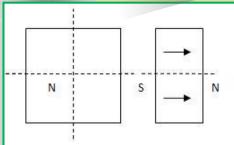
## SURFACE TREATMENT



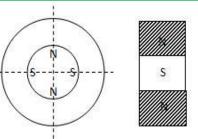
Coating		Code	Color	Minimum	Memrge etching time		ı time	Working
				Local	Neutralsalt	Humid	Pressure	temperature
				Thickness	Spray test	heat	Vessel	
						test	test	
N	i(Barrel plating)	Ni	Sliver	10	24	300	48	<200
N	Ni(rack plating)	Ni	Sliver	10	8	300	48	
NiCu	NiCuNi(barrel plating)		Sliver	10	72	500	48	
NiC	NiCuNi(rack plating)		Sliver	10	48	500	48	
Zinc	White zinc	Zn	White Zinc	4	24	48	/	<170
	Color zinc	CZn/Zn	Color Zinc	6	48	48	/	
Che	Chemical plating Ni		Silver	12	96	500	48	<200
Elec	Electrophoresis epoxy		Black,grey	10	48-96	120	0-24	<130
Parylene		Parylene	Colorless	12.7-25.4 microns	48	/	/	<130
			and	Meet the MIL-I-				
			transparent	46058C standard				

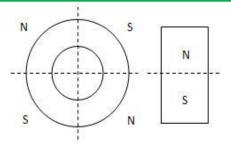
### **MAGNETIZATION MODE**





 $\begin{array}{c|c} & & & \\ & & \\ & & & \\ & & \\ & & \\ & & & \\ & & \\ & & & \\ & & \\ & & \\ & & & \\ & & \\ & & & \\ & &$ 



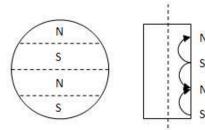


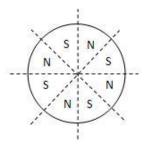
Magnetized through the thickness

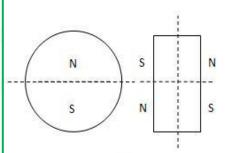
Axially Magnetized

Multi-poles on inner diameter

Multi-poles on outer diameter

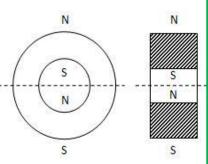






N

N

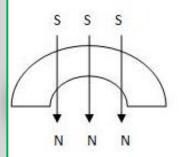


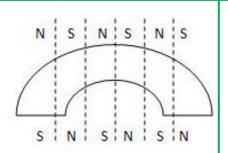
Multi-poles on one side

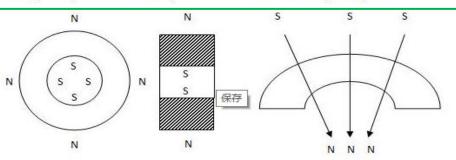
Multi-poles on one side

Axially Magnetized with two poles

Diametrically Magnetized







Radially Magnetized

Radially Magnetized

Diametrically Magnetized

Diametrically Magnetized with Multi poles



# PRODUCT PHOTOS(BLOCK SHAPE)

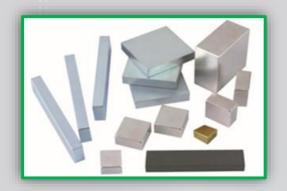


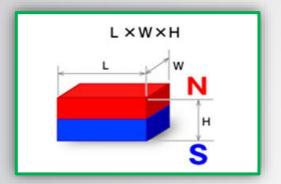






















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### PRODUCT PHOTOS(DISC SHAPE)



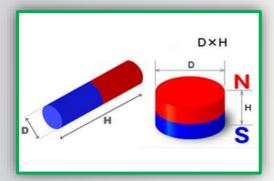






















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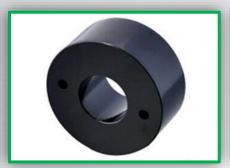


### PRODUCT PHOTOS(RING SHAPE)



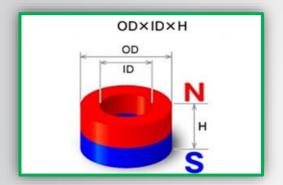






















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### PRODUCT PHOTOS(ARC SHAPE)



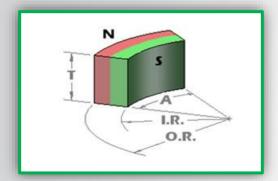








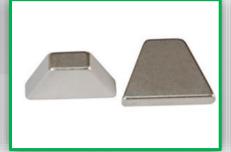


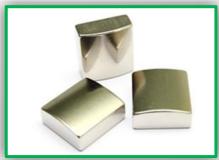














### PRODUCT PHOTOSCOTHER SHAPE



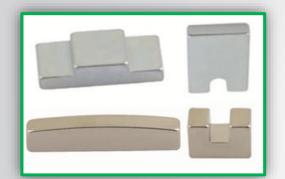




























#### Packing of our products:

- 1. Sea shipment: strong cartons and then packed in strong wooden cases.
- 2. Air shipment: well shielded cartons for magnetism inspection.

#### **Our Shipping ways:**

- 1. Express courier, TNT, Fedex, DHL, UPS for your choice.
  - (1), Ship door to door. You can provide your express account for the freight payable at destination. (2), Delivery time: 3-7 days
- 2. Air cargo, shipping to your nearest airport.
  - (1), If you choose this way, please provide us your nearest airport. (2), Delivery 5-15days. (3), Suitable for cargo over 45 kg
- 3. Sea cargo, shipping to your nearest port.
  - (1), If you choose this way, please provide us your nearest port and zip code. (2), Delivery approximately 30 days.
  - (3), This type of shipping is suitable for cargo over 200KGS, or have big volume.



#### **OEM** are welcomed, samples is available, small orders accepted.



# To offer you our magnets price, please offer the following details:

- 1,Magnets grade:From N35 To N50, from N Series to UH Series.
- 2, Magnets size: As the drawing
- 3,Magnetism direction:Which direction to oriented The north pole and south pole
- 4,Magnets coating:Nickel, Zn, Black Epoxy, AG, Au etc.
- 5, Quantities: More mass order quantities. More Lower the prices. Original factory.

#### Let Us Assist You!

Our magnet experts will help you get exactly what you need - custom or stock - in record time with great quality at a very competitive price.





**SCAN TO VISIT OUR WEBSITE** 

# SINONEO MAGNETS CO.,LTD.

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