

Alnico Magnet

General Description AlNiCo Magnet.



Alnico describes a family of materials, which is derived from a common base composition comprising of aluminum, nickel, cobalt and iron with varying additions of other elements. By varying the composition it is possible to tailor the magnetic properties to meet the needs of a wide variety of end use applications. There are two different manufacturing processes for Alnico: Cast Alnico can be made into many sizes and shapes, whereas Sintered Alnico is usually restricted to smaller sizes. However, both processes are not suitable for complex geometry and configurations, both alloy systems are hard and brittle and do not lend themselves to conventional machining. Standard Sintered Alnico has tighter dimensional tolerances due to its processing. It also has slightly lower magnetic properties, but better mechanical strength than Cast Alnico products. Alnico alloys, which possess the lowest reversible temperature coefficient magnetism in permanent magnet materials, have excellent working temperature up to 600°. High Nickel content of Alnico alloy result in good stability against corrosion and oxidation, this metallic composition is also a good electrical conductor.

Advantages for using Alnico:

- Excellent temperature characteristics
- Capable of working at a wide range of temperature up to 550°C
- High field strengths at medium prices
- Easy of magnetizing
- Compatible with most painting or plating systems (including nickel and copper)

Disadvantages:

Alnico products can be affected by exposure to the repulsive forces.
Alnico products are hard and brittle and are not suited to common drilling, tapping or machining operations, and should not be used as a structural component in any devices.

CHARACTERISTICS

- Suitable for small volume magnet with complex shape;
- Compact crystal, high intensity;
- Regular shape, precision size;
- Even elements, stable performance;
- Suitable for compound magnet;
- Excellent temperature stability (temp. coefficient of Br is the smallest among all of the other

permanent magnets

APPLICATION

Inner magnetic voltmeter/ammeter,electronic type power energy measuring instrument,avometer,flowmeter;

A wide range of magnetic sensor,polarized relay,temperature and pressure controller;

Buzzer of Mobile phone,hearing aids,mini speaker;

lighter of automobile,odometer of automobile and motorcycle,permanent motor,adsorptive appliance;

Widely applied in high stability fields as aviation,spaceflight,and military technology. motorcycle,permanent motor,adsorptive appliance;Widely applied in high stability fields as aviation,spaceflight,and military technology.

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