

# Flexible Magnet

## General Description Flexible magnet



Flexible magnet covers a wide variety of magnet materials. The different categories are defined partly by the actual input magnet chemical constituents and partly by the magnet material manufacturing process. The most common constituents in Flexible ferrite magnet material Barium Ferrite and Strontium and, more recently, in rare earth Flexible material, Neodymium Iron Boron, all loaded into PVC binders. Most Flexible magnet material is produced in strip or sheet by extrusion process. Higher magnetic characteristic/performance Flexible material is obtained either by work rolling/hardening in the rolling process or by including special additives to the chemical constituents.

Flexible materials has a particular steady magnetic power and a smooth surface, which is a uniquely desirable combination of properties for many product designer with a lower cost, especially in flexibility and machinability, no other magnetic materials has this characteristic comparable to it.

Flexible materials is enough soft to be easily bent, twisted, coiled, punched, and otherwise machined into almost any shape without loss of magnetic energy.

### Manufacturing Methods

**Extrusion:** to produce materials in strip form (from approx.6.4mm to 254mm wide)

**Calendering:** to produce materials in sheet form (roll and sheet can be cut or die-cut easily. Their standard thickness is from .015"(0.4mm) to 0.60"(1.5mm), roll length is from 32"(10m) to 200"(60.96m)

### Machining

Flexible materials are relatively easy to fabricate: they may be cut, scored, punched, slit, or die cut to shape, including strip and sheet in the lower energy grades, strip and a variety of punched parts in ring, disc, and bar shapes in the higher energy grades. The dimensions

and the characteristics could be changed according to your requirement.

### **Surface Treatments**

We are able to laminate a variety of decorative facings to magnetic strips, sheets and rolls with PVC( white PVC, matte white-PVC, and gloss white-PVC and color PVC, such as red, yellow, black, brown, etc),self adhesive(standard adhesive and 3M adhesive), and UV.

Please noted Custom laminations available, customer-supplied laminates can be applied subject to testing.

### **Magnetizing**

Low energy Flexible magnets are magnetized with multiple poles(.pole width 2,4,7mm or 12,7/6.4/3.6 poles per inch) on one surface to give greater holding force. Higher energy Flexible magnets are magnetized either multiple pole, or single pole on one surface.

### **Temperature Effects**

Magnetic properties of Flexible magnets demagnetization linearly with temperature in the same way as Ceramic magnets. However, the limiting factor for Flexible magnets are the binder materials used to render them Flexible: these begin to flow at temperatures of about 250F.

### **Applications for Flexible Magnets**

The Isotropy and Anisotropy Flexible magnets formed by pressing or injecting method is widely used in abeling, holding, door gaskets, and signs, to micro-motors , motor industry and the high-tech industry as well as CRT focusing, especially, which is the best material to produce door gasket , which are widely used for magnetic sealing in the refrigerator, ice box, kitchen cupboard and other dryer.

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Add :Floor 16, Jinyuan plaza, # 57 Hubin nan Road, Xiamen, CHINA 361004

Tel : (86)592 2295387 (86)592 2217138 Fax: (86)592 2207122

Email : yingli@magnets.com.cn or mag@e-magnet.cn

***Magnets Products Suppliers  
YuXiang Company.***