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The birth of the flexible magnet is a direct result of American ingenuity. “A child has suffocated in a locked refrigerator,” was the tragic beginning of the advancement of flexible magnetic materials in the late 1950s. A necessity arose for a new closing mechanism on refrigerators that were both safe and effective. Efforts were put forth, and the General Tire & Rubber Company developed a flexible magnet strip extruded within a plastic gasket profile. This new magnetic strip locking mechanism had the added benefit of better sealing power and is now used worldwide in all brands of refrigerators. From this dramatic beginning, flexible magnet has become a staple in many industries, including signs and graphics displays.

Flexible magnets are produced in two distinct manufacturing methods. Both start with the formulation of a compound of magnetic powder, plastic/rubber binders and liquids. Extruding is used to create magnetic strips and custom profiles used to hang signs and hold labels. Calendering is the production method used to create sheet magnet and is the most commonly used magnetic product in the sign and graphics industries.

Today, magnets are all around you, including retail signage, displays and trade shows. The market opportunities for sign and display makers are endless with printable magnets:

- Vehicle Signs
- Menu Boards
- Attendance Boards
- Directories/Location Identification
- Calendars
- Marketing
- Reminders
- Save the Date
- Warehouse Labeling
Magnetic receptive materials transform a surface into a platform for flexible magnetic signs or hard magnets. (Photo courtesy Rochester Magnet)

Magnets can be printed onto directly or can be used as structural hanging or mounting devices in flexible magnet or hard magnet forms. Flexible magnet can easily be attached to signs using adhesive tape for further mounting to metal ferrous surfaces or magnetic receptive surfaces available in flexible sheet formats.

Finding new and easy ways to integrate magnets will help your customers with installation, management, and movement of signage. It will also allow you to create new designs that help increase revenues and achieve versatility you have not had before.

**Magnetic Sheets Printing Options**

Many sign shops are familiar with printing on flexible magnet with vinyl facing. Most commonly these are screen printed and found on vehicle signs. These are easy to put on and take off, which allow ease of vehicle transformation from personal to business or transition from vehicle to vehicle. Removing them nightly prevents theft and helps protect the finish of the vehicle. With an increase in service businesses nationally, this is a large opportunity for sign shops. Also, the magnets can be moved or changed out easily or economically replaced as the message updates.

A large, growing application for flexible magnet is printing on digital substrates that run through most of today’s advanced printers. A wide variety of inks specific to your indoor or outdoor project can be used to ensure durability. These range from UV or latex to solvent and non-solvent based. Specific top coats or laminates are added to the magnet for compatibility with specific printers. Newer, advanced magnetic materials allow for the use of thinner magnets to run through today’s high-speed digital presses without losing magnetic strength. Last but not least is whether to print on magnetized or unmagnetized media. Magnetized material is best used in printers that do not have metal rollers or where the metal parts can be covered by creating a barrier (air gap) with poster board or similar materials. If it is not possible, running unmagnetized material will run like thick paper. Once complete, the sheets are magnetized with a wide variety of magnetizers suited for low- to high-volume jobs.

**Prefer Not to Print on Magnet? No Problem**

Another option is to print the sign on your substrate and laminate it to flexible magnetic sheets available in 30” width and up to several hundred feet long. The sheets are available plain (no printable surface or adhesive) for you to add your favorite adhesive or buy them laminated with a wide variety of adhesives tailored to your specific needs. Acrylic-based adhesive is typically used for outdoor applications while rubber-based adhesive is for indoor or less harsh environments. From here, simply laminate the printed material to the magnet for easy sign construction. This allows you to print the way you always do while adding magnets to your line up with a simple process change.

Flexible magnet is available in various.
thicknesses, which dictate their strength—the thicker the magnet, the stronger the pull force. Sheets are available from 8 mil thick up to 60 mil. The most common are 20 mil and 30 mil with 30 mil recommended for vehicle signage.

Flexible magnets are an easy way to create labeling to identify products, locations and devices, which encourages your customers to return with reorders for new printed material and supplies. You can supply them with materials for seasonal displays or quickly changing product requirements.

Let your customer write it themselves with write on/wipe off surfaces. The same printable flexible magnet is available with a dry erase surface to allow for frequently changing messages or the creativity of your customer.

Build the Sign and Add Magnets for Hanging
Flexible magnet is also available in rolls or strips of various thicknesses and widths. This enables you to place, for example, 1/2” or 1” strips around the borders for incorporating a sign onto a metal frame. This also allows you to build the sign using a wide variety of materials while still allowing your customer the flexibility to hang, move and position as needed.

Common applications for these include store displays where the strips of magnet are attached using vinyl adhesive to display the message.

Hard magnets such as rare earth magnets or ceramic magnetic assemblies can be used for mounting or hanging signs. These allow for easy attachment to other metal surfaces without drilling holes or using adhesives that require removal when changing signs. With a wide range of pull strengths and design, a variety of magnets are available for almost any application that has weight or has other items hanging from the sign.
Shape it Your Way

Flexible magnet is easy for you to purchase by the roll and shape anyway you like. Magnet can be die-cut, scored, trimmed with scissors, or cut with a knife. This allows the magnet to take the shape you need and discreetly blend in with the sign.

Tricks for Perfect Alignment

Sign and display makers often use match pole flexible magnet when mating seams between graphic panels to eliminate the challenges of alignment. These magnets mate face to face from the graphics panel to the display bracket ensuring no visible gap and proper alignment. Large stand displays that may have previously used hook and loop solutions now use match pole flexible magnet to reduce set-up and alignment time. This is especially helpful when aluminum (a non-magnetic receptive surface) is part of your design.

Match pole is commonly available in 1/2” or 1” widths and 30 mil or 60 mil thickness with the option of rubber or acrylic adhesive. The rolls of magnet are typically ordered in pairs with an A side and a B side.

Magnetically Receptive Surfaces

When your application calls for magnets and the mountable surface is non-metallic, magnetically receptive sheeting can provide that base. This material is available with printable substrates to give the background for the main sign, which does not change. Printed flexible magnets or other materials that have incorporated hard magnets are used to change the message. This is commonly seen in restaurants, salons and retail venues where specials of the day change often. The magnetic receptive material comes with a printable vinyl topcoat with or without an adhesive back for easy mounting to walls and other surfaces.

From its life-saving origins to today’s extremely useful signage material, flexible magnetic sheeting has proved itself to be an extremely versatile product.