

**ZIP CRIP™**

**FLEXIBLE  
MAGNETIC  
SHEETING  
AND STRIP**

**THE MAGNET  
SOURCE™**

# ABOUT THE COMPANY

The Magnet Source™, manufactures and distributes all types of magnets and magnetic devices for industrial, commercial and consumer use. Master Magnetics, Inc., the main manufacturing facility located in Castle Rock, Colorado, was founded in 1976. Miami Magnet Company (founded 1956), A-L-L Magnetics, Inc. (1985), and Master Magnetics East (1994) joined Master Magnetics, Inc., using the exclusive trade name, The Magnet Source™. Today, we serve customers across the United States and abroad.

We have over 15 million magnets in stock. Our large inventory and warehousing capabilities allow us to effectively serve a wide range of customers with many types of applications.

**Other magnetic products available:** Request one of these catalogs or visit our web site at [www.magnetsource.com](http://www.magnetsource.com)

## Permanent Magnet Material

This literature features raw material magnets such as Alnico, Ceramic, Samarium Cobalt, and Neodymium magnet materials for OEM applications, as well as gauss meters and books on magnetism.

## Magnetic Devices

Includes a variety of magnetic assemblies used for lifting, holding, retrieving, separating, work-holding and material handling type applications in manufacturing facilities.

## Hardware

Magnets designed and packaged for resale through hardware stores, home centers, lumber yards and equipment rental stores to assist with work holding, tool organization, cleanup, and saving time on projects.

## Craft & Hobby

Magnets packaged for resale through craft and hobby stores, sewing and notions stores, etc.

## Toy & Educational

Magnets, accessories, and kits designed and packaged for resale through specialty toy stores, educational supply stores and catalogs, gift and novelty stores, and mail order catalogs.

## C O N T E N T S

About the Company .....	2
Made In The USA .....	3
Magnetic Sheeting .....	4
Die-cut Magnetic Shapes .....	6
FlexIRON™ Magnetically Receptive Material .....	7
Magnetic Strip .....	8
Magnetic Inventory Labels .....	10
High Energy Magnetic Strip .....	11



The information contained in this literature is intended to inform the reader. The Magnet Source™ cannot be held responsible for any misapplication or misjudgment resulting from the use of the information.

Copyright © 1998 by Master Magnetics, Inc. All rights reserved. The Magnet Source™, Zip-Grip™, and FlexIRON™ are trademarks of Master Magnetics, Inc.

## WHAT IS ZIP-GRIP™?

ZIP-GRIP™ is the trade name used exclusively by The Magnet Source™ to describe our quality flexible magnetic sheeting and strip products and custom services. We call it "ZIP" for our speedy delivery and "GRIP" for its magnetic strength. Made in the USA by quality manufacturers and stocked, processed and distributed worldwide from our Ohio processing facility; this material is engineered for maximum versatility and reliability.

## WHAT'S BEHIND THE ZIP-GRIP™ NAME?

- ✓ Massive stock
- ✓ Speedy delivery
- ✓ Competitive pricing
- ✓ Precision processing by skilled operators
- ✓ Ability to slit, cut, score cut, and die cut
- ✓ Knowledgeable, friendly Customer Service people
- ✓ Years of magnet business experience
- ✓ Low minimum order requirements
- ✓ And a desire to be . . . YOUR BEST SOURCE IN THE MAGNETIC FIELD!

## ATTRIBUTES OF ZIP-GRIP™ FLEXIBLE MAGNETS

### Powerful

- ZIP-GRIP™ is supersaturated with magnetism in a multiple pole magnetization pattern, so its magnetic strength is evenly distributed across the surface. The thicker the material, the greater the strength. Permanent magnetism is guaranteed as long as the material is not subjected to a demagnetizing force.

### Durable

- ZIP-GRIP™ is easy to maintain and safe for finished surfaces. It contains no oils or plasticizers that can cause cracking, drying out or surface migration.

### Safe

- The material is lead-free and barium-free, making it a non-toxic substrate that is safe to work with.

### Machinable

- ZIP-GRIP™ is easily drilled or cut with scissors, knife, die or punch to fit your application.

### Temperature Range

- ZIP-GRIP™ is designed to withstand continuous exposure to temperatures from -40°F to 160°F without demagnetizing.

## HOW ARE FLEXIBLE MAGNETS MADE?

A dry mixture of ferrite powder and rubber polymer resin is mixed, calendered and ground; then formed either by extrusion (for magnetic strip) or rollers (for magnetic sheeting). The material is then magnetized, laminated with vinyl or adhesive, cut to size, rolled onto a core, and boxed for shipment.

## WHEN IS FLEXIBLE A GOOD CHOICE?

Flexible magnets are the least expensive by volume and most pliable permanent magnet material when compared to ceramic (ferrite), alnico or rare earth magnets. They perform

TYPICAL MAGNETIC PROPERTIES			
Residual Induction (G)	Coercive Force (Oe)	Intrinsic Coercive Force (Oe)	Max Energy Product BHMax(MGOe)
1650	1350	2375	0.60

well in a wide variety of simple applications for home, school, shop and office. They are lightweight, flat, easy to print on and easy to cut with scissors, knife or die. And, ideal for advertising specialties and lightweight holding applications.

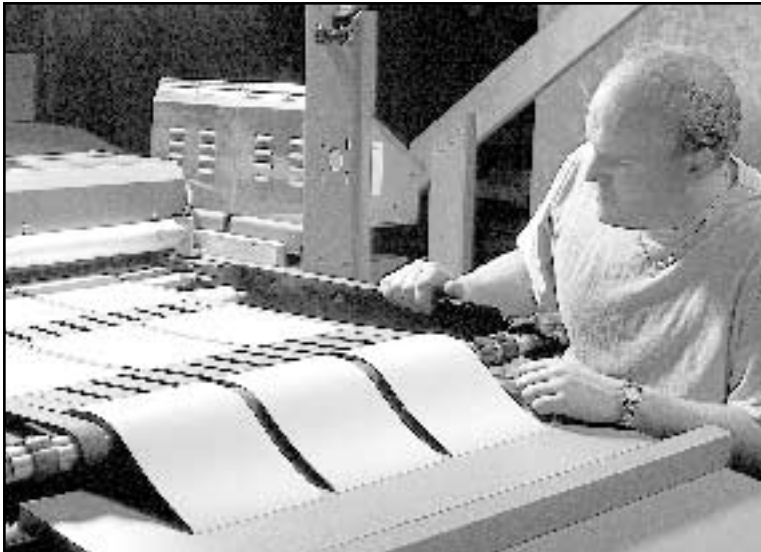
# ZIP GRIP™ MAGNETIC SHEETING

## APPLICATIONS

- Advertising Specialties
- Vehicle Signage
- Shelf & Bin Marking
- Craft & Hobby
- Photo Mounting
- Point of Purchase Displays
- Display Boards
- Signage
- Automobile Paint Masking
- Nameplates
- Novelties
- Premiums
- Menu Boards
- Sales Promotions
- Toys
- Visual Aids
- Graphics

## FINISHING IDEAS

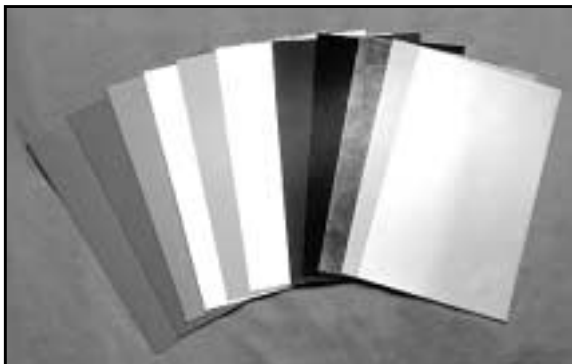
- Die Cut
- Pad Print
- Thermograph
- Hand Letter
- Screen Print
- Stencil
- Adhere Vinyl Lettering & Graphics



High-speed cutting and slitting equipment, run by trained professionals, means impeccable precision and speedy delivery for your custom orders.



You print the signs, we supply the magnet to be printed or painted.



A little color goes a long way. Make a two color job by printing only one color.

## CARE AND MAINTENANCE OF VEHICLE SIGNS

1. The vehicle surface and magnet side of the sign should be cleaned, dried and waxed.
2. Remove magnetic sign when cleaning vehicle.
3. Sign area should have no molding or air gaps.
4. Clean magnetic side of sign before placing on vehicle.
5. Use mild detergent and warm water to clean magnetic signs. Both the sign surface and the vehicle should be cleaned weekly for best results.

## SHEETING CHARACTERISTICS

"Attributes of ZIP-GRIP™ flexible magnets" are listed on page 3. The USA produces the largest volume and the highest quality flexible magnet material in the world. Compare attributes when comparing prices.

## DIMENSIONS

- Standard Width: 24 3/8" (+/- .060")
- Standard Lengths: 10, 25, & 50 ft. rolls
- Standard Thicknesses: .015" to .060" (+/- .003")
  - .015" & .020" – Ideal for advertising specialties; lowest cost and weight
  - .030" – Recommended for vehicle signage; strong enough for wind shear at highway vehicle speeds. Pre-cut sign blanks available from stock (12" x 24 3/8" or 18" x 24 3/8")
  - .060" – Customer preference for applications requiring higher strength, and thicker profile.

## LAMINATIONS

A variety of high quality laminations are available that are typically applied to the non-magnetic (weak) side of the sheeting.

### Vinyl Features

- High-quality top coat allows superior adhesion of most screen print inks and lettering enamels
- Will not crack when material is flexed
- Excellent weather resistance to rain, snow, and summer heat

### Vinyl Choices

- Gloss White
- High Gloss White
- UV Ink Gloss White
- Colors - Red, Orange, Yellow, Green, Blue, Black, Gold, Brown, Ivory, Chrome, Silver

### Adhesive Choices

- Rubber-Based Craft Adhesive (indoor & craft applications)
- Rubber-Based High-Tack Adhesive (outdoor applications)
- Acrylic-Based Adhesive (indoor/outdoor for adhering to plastics and soft vinyls)
- Uncoated (no vinyl, no adhesive)

### Custom Laminations Available:

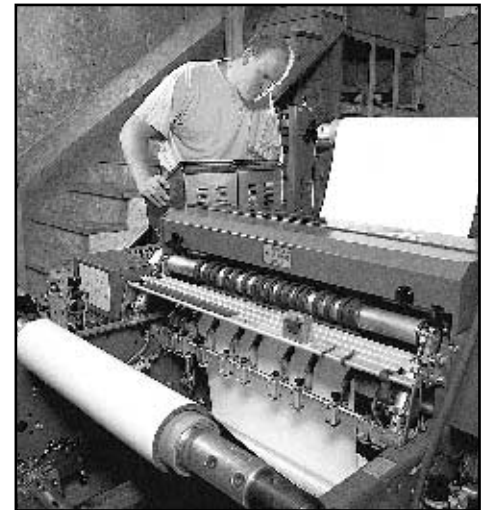
- Write-on/Wipe-off (white)
- Vinyl on magnetic side with adhesive on reverse
- High Gloss White Paper; less expensive than vinyls, accepts larger variety of inks, can write on with ink pens, easier to get crisp die cut, only for indoor applications

## CUSTOM CUTTING CAPABILITIES

Our precision equipment will cut any roll of flexible sheeting material to the size that your application requires – even as small as 2" by 1/2" (+/- .060" on either dimension). This is achieved using a combination of state-of-the-art computerized slitting and cut-off equipment. Please consult your sales specialist to have cut piece yield estimates calculated.

### Cutting

High speed cutting equipment cuts full rolls to sizes as small as 2" by 3.5" with a tolerance of +/- .060" on either dimension.



*Precision slitting equipment*

### Slitting

Slitting wheels slit a full roll into several rolls of various widths as narrow as 2", with a precision of +/- .060".

### Die Cutting

Custom and standard shapes available. See page 6.

## STRENGTH

The thicker the flexible material the stronger the magnetic strength. Under ideal test conditions, magnetic sheeting can be rated in approximate pounds of pull per square foot. Peel strength is not rated.

Thickness	Pull per sq.ft.
.015"	45 lbs.
.020"	54 lbs.
.030"	82 lbs.
.060"	130 lbs.

# DIE-CUT FLEXIBLE MAGNETIC SHAPES

## DIE-CUT FLEXIBLE MAGNETIC SHAPES

Producing advertising specialties and premiums using flexible magnets is now easier than ever with die-cut magnetic shapes. The Magnet Source™ offers .020" thick ZIP-GRIP™ flexible magnetic sheeting in seven die-cut shapes. Whether you pad or screen print, these popular shapes are cost effective and readily available to launch you competitively into the ad specialty market. No purchase of dies or jigs is necessary. Available in gloss white or colors (black, brown, blue, gold, green, red, silver, yellow, orange). Colored sheets make a two color job easier by printing only one color. Custom shapes available.

### Popular Shapes and potential markets

**Business card** – Any business

**Photo frame** – Promos for portrait studios to offer in package deals, newborn announcements, craft projects (includes middle section)

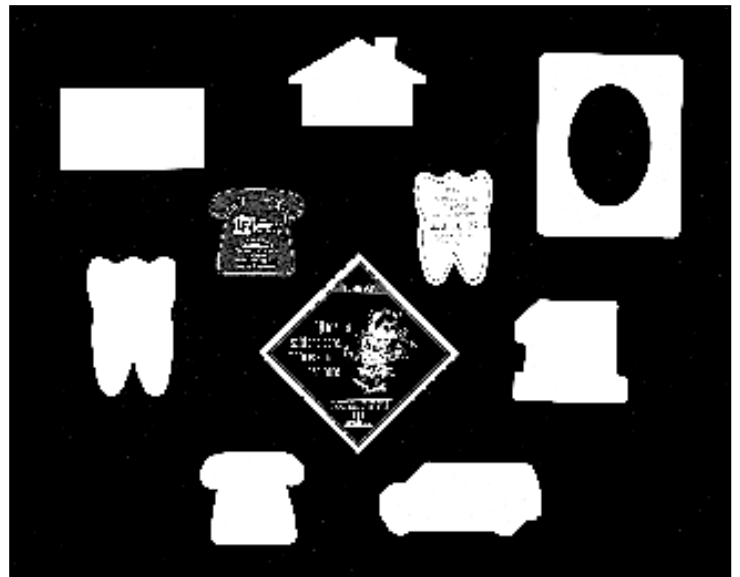
**Van** – Delivery services, flowers, food, construction, car pools

**Tooth** – Dentist appointment reminders or mass mailers for orthodontists or veterinarians

**House** - Real Estate, home inspectors, building contractors, home care, home repair

**Telephone** – Help lines, food service, emergency numbers, date lines, school districts

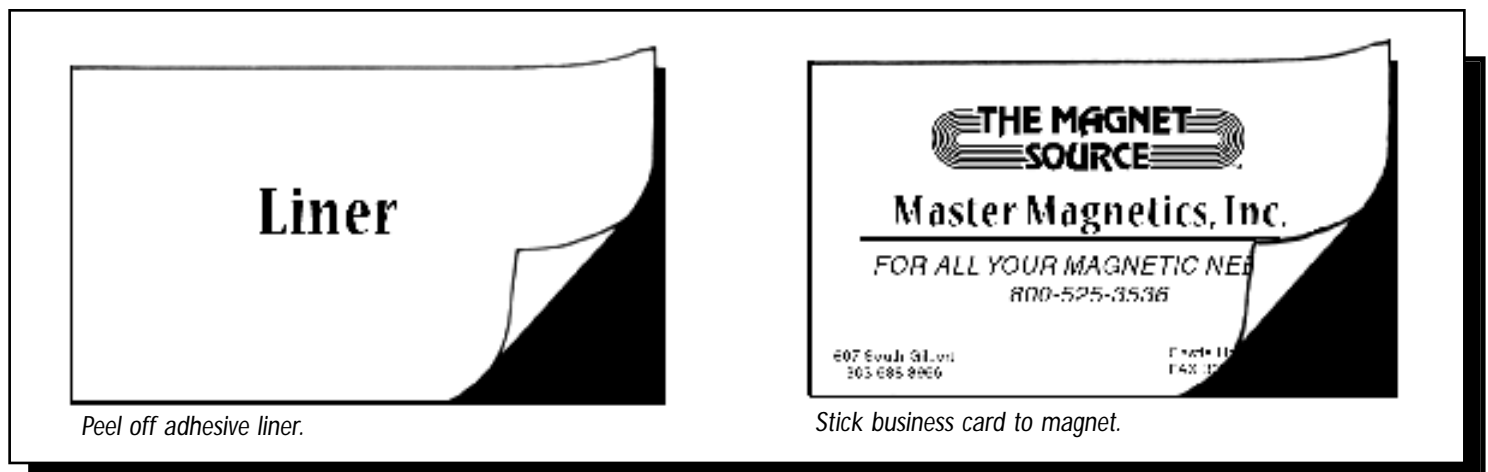
**Number 1** – Awards, school boosters, any business who wants to promote their status in the market



Die-cut shapes

## MAGNETIZE YOUR BUSINESS CARDS

Get an edge on the competition by magnetizing your paper or plastic business cards. It's a fact that magnetic business cards get used. Business contacts will display your magnetized cards on nearby metal desks, filing cabinets, appliances and more, keeping your card in full view! To assemble, simply peel back the magnet's adhesive liner and apply your business card. Magnetic cards measure 2" x 3.5" (+/- .060" on both dimensions) to fit standard business cards. Stock is on hand and ready for immediate shipment. Available in .020" or .030" thicknesses.



Peel off adhesive liner.

Stick business card to magnet.

## Magnetically Receptive Material



Introducing FlexIRON™, the unique, versatile, flexible, ferrous material that attracts magnets. It looks like flexible magnetic sheeting, yet it is not a magnet. It is a magnetically receptive material that attracts all types of low profile magnets, including flexible and ceramic magnets. Either surface attracts magnets. And it is easy to drill or cut with scissors, knife, die, or punch. Just imagine the possibilities!

## DIMENSIONS

FlexIRON™ is .025" thick by 24 3/8" wide and is available in rolls of 10, 25, or 50 foot lengths.

## CUSTOM SIZES

We can cut full rolls to custom dimensions with the same precision equipment used to process magnetic sheeting.

## AVAILABLE IN FOUR STYLES:

- 1. Gloss white vinyl surface on one side; plain on reverse side.**
  - Screen print white surface with game boards, maps, schedules, templates, etc.
  - Die cut to any shape.
  - Roll it up and put it in a tube for portability and storage.

- 2. Gloss white vinyl surface on one side; rubber-based craft adhesive on the reverse.**
  - Screen print white surface
  - Die cut to size
  - Adhere to rigid surface
- 3. White Write-on/Wipe-off surface on one side; plain on reverse side.**
  - Put grommet holes in all four corners, hang it in a store for versatile signs, or use in the office, home, or school.
  - Put it in a picture frame and create your own write-on/wipe-off board.
  - Get write-on/wipe-off markers at any office supply store.
- 4. White Write-on/Wipe-off surface on one side, rubber-based craft adhesive on reverse side.**
  - Peel off adhesive liner on reverse side and apply material to a rigid surface to make your own write-on/wipe-off marker board and/or surface for sticking magnets.
  - Recondition or upgrade existing write-on/wipe-off boards that have surface damage by applying FlexIRON™ over them. If they didn't hold magnets before, they will now.

Note: Write-on/wipe-off surface cannot be screen printed.

## APPLICATIONS

- Hotel/Restaurant menu boards/signs
- POP display signage
- Educational games/toys
- Warehouse shelf labeling if you don't have metal shelves already
- Sign in/Sign out boards for the office
- Anywhere a metal substitute is needed to attract a magnet.

# ZIP GRIP™ FLEXIBLE MAGNETIC STRIP

## APPLICATIONS

- POP displays
- Signs
- Crafts
- Tradeshow Displays
- Prototyping
- Shelf and Bin Labeling
- Manufactured Products
- Kits

## STRIP CHARACTERISTICS

"Attributes of ZIP-GRIP™ flexible magnets" are listed on page 3. The USA produces the largest volume and the highest quality flexible magnet material in the world. Compare attributes when comparing prices.

## DIMENSIONS

Standard Widths: 1/4", 3/8", 1/2", 3/4", 1", 1.5", 2", 3"  
 (+/- .015" < 2" widths > +/- .030")

Standard Thicknesses:	.030"	.060"	.125"
Standard Roll Length:	200ft.	100ft.	50ft

Also available in .045" or .085" thickness

Note: Tighter tolerances can be achieved in some instances at customer request.

## LAMINATIONS

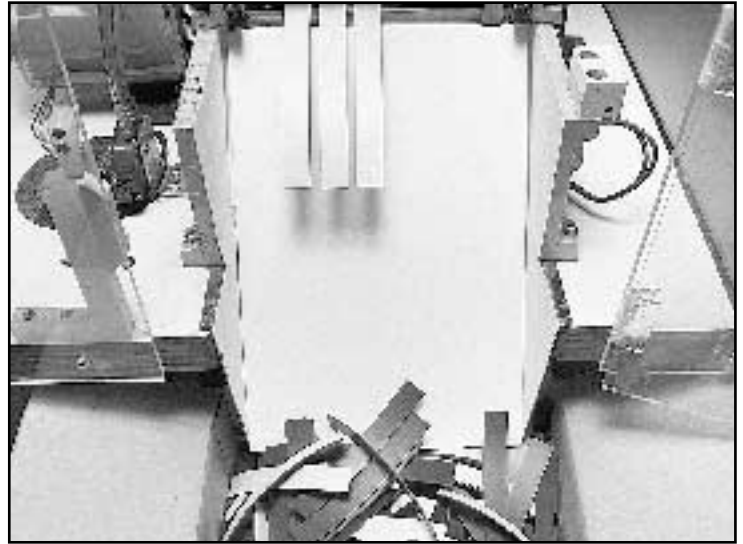
A variety of high quality laminations in the form of vinyls and pressure sensitive adhesives are available that are typically applied to the non-magnetic (weak) side of the strip. Strip is also available with no laminate (uncoated).



*Rolls of flexible magnetic strip.*

### Vinyl Features

- Will not crack when material is flexed
- Excellent weather resistance to rain, snow, and summer heat



*Cutting*

### Vinyl Choices

- White
- Colors - Red, Orange, Yellow, Green, Blue, Black, Gold, Brown, Ivory, Silver
- White on magnetic (strong) side, adhesive on the other

### Adhesive Choices (all provided with peel-off liner)

- Rubber-Based Craft Adhesive (indoor & craft applications)
- Rubber-Based High Tack Adhesive (outdoor applications)
- Rubber-Based Foam Adhesive (adheres to uneven or porous surfaces)
- Acrylic-Based Adhesive (indoor/outdoor for adhering to plastics or soft vinyls)
- Acrylic-Based Foam Adhesive (adheres to textured, porous, and plastic or vinyl surfaces)

## MAGNET-TO-MAGNET APPLICATIONS

1/2" wide x .060" thick strip with Side A (smooth) and Side B (grooved middle) that match up with even pole spacing for magnet-to-magnet applications. For example, tradeshow displays and storm windows. Comes with acrylic adhesive on the back. (Note: Not interchangeable with existing systems.)



## CUSTOM PROCESSING CAPABILITIES

Our state-of-the-art precision equipment can cut, score, or score-cut any roll of flexible strip material to the length that your application requires. Please consult your sales specialist to have cut piece yield estimates calculated.

### Cutting

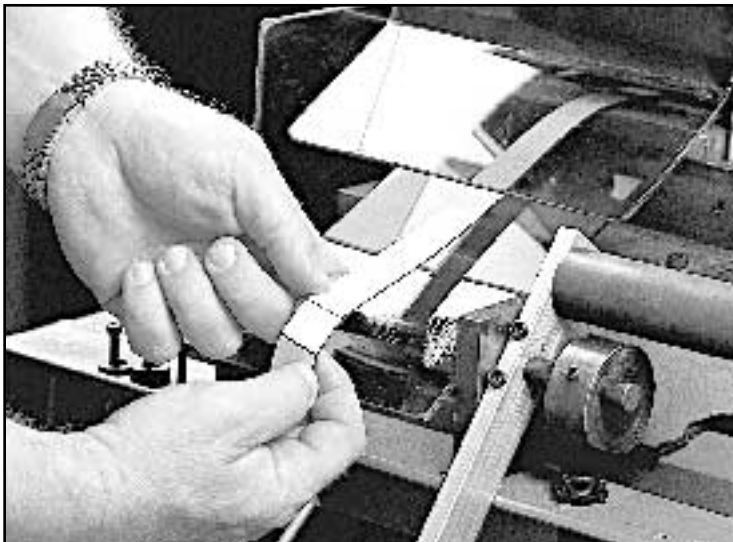
High-speed, computer calibrated cutting equipment cuts full rolls to lengths as small as 1/2" with a tolerance of +/- .060".

### Scoring

Specialized scoring machines make a precise cut through the adhesive liner and into the magnet at even intervals along the entire length of a roll with a tolerance of +/- .060". Pieces can then be snapped off the roll at the desired length. Tighter tolerances are attainable on shorter cuts.

### Score-Cutting

Sophisticated score-cutting equipment makes a calculated cut through the magnet side, up to the paper liner at even intervals along the entire length of a roll with a tolerance of +/- .060". This makes it easy to peel the magnets off the liner for quick assembly line jobs. Tighter tolerances are attainable on shorter cuts.



Scoring



Score-Cutting

### Packaging

The Magnet Source™ even offers flexibility in packaging. Our strip is typically shipped in a plain brown box, however, we have the technology to offer a higher level of service. Have your product private labeled in a shrink wrap pack, a header bag, a counter display box, or on a blister card, just to name a few options.

### Strength

The most popular thickness of magnetic strip is .060" because it provides a substantial amount of strength for most strip applications. Under ideal test conditions, magnetic strip can be rated in approximate pounds of pull per foot. Peel strength is not rated.

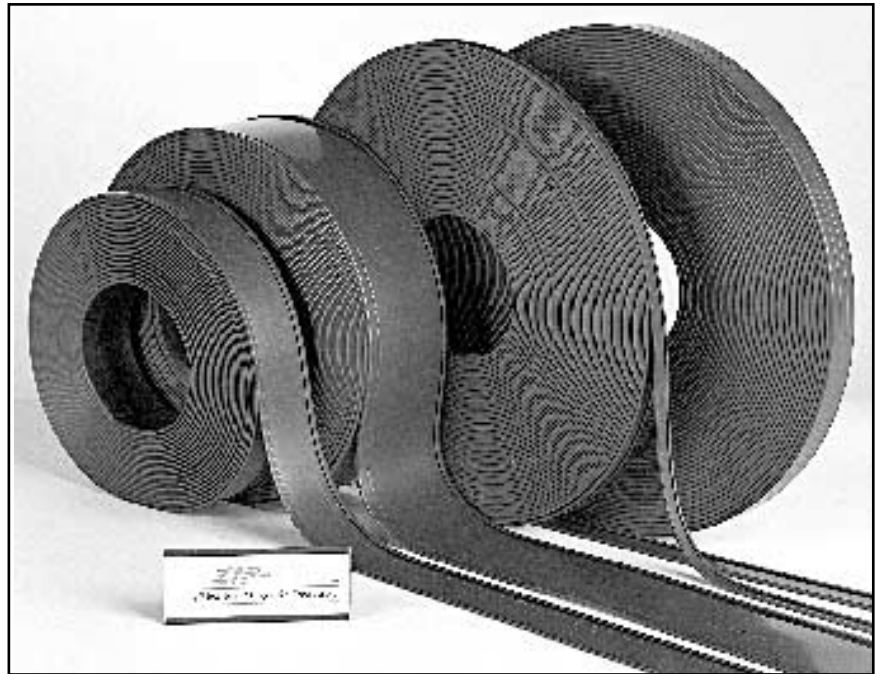
Width	Pull per foot
1/2"	7 lbs.
3/4"	10.5 lbs.
1"	14 lbs.

# MAGNETIC INVENTORY LABELS

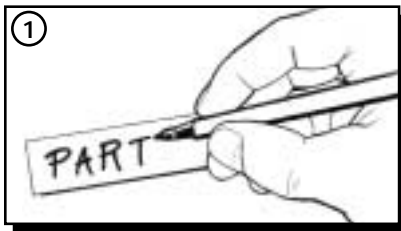
Use magnetic inventory labels to keep track of inventory/stock. These handy, repositionable magnets are perfect for use in warehouses, retail stores, medical and postal facilities, libraries, and stockrooms equipped with metal shelving units or sorting bins. If you don't have metal bins/shelves, simply apply FlexIRON™ to make a magnetically receptive surface.

Labels are designed to hold pre-printed or handwritten data cards that can be paper thin up to 1/32" thick and 3/8", 13/16", 1-5/8" or 3" wide. Data cards are available at office supply stores. Use 3" x 5" index cards on RE90 material.

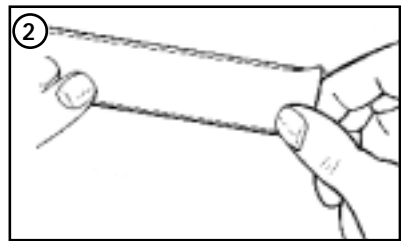
Choose from three types of magnetic inventory labels (illustrated below). Available in rolls or prescored/precut to label length:



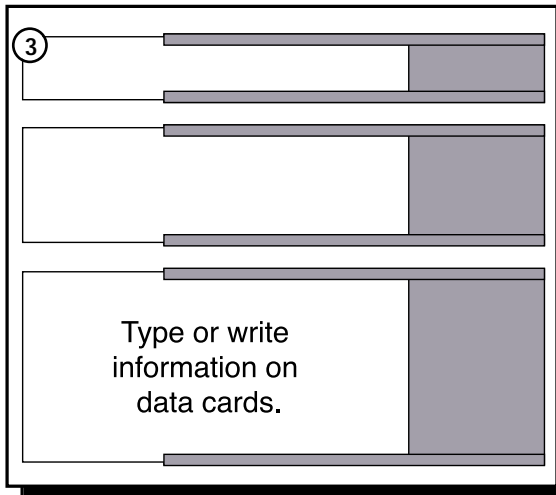
1. **Flexible magnetic strip with vinyl coating** (vinyl coating on one side, magnetic on the other).
2. **Flexible magnetic strip**, available plain or with adhesive backing.
3. **Flexible magnetic data card holders**. These pre-formed magnetic channels are designed to hold pre-printed or handwritten data cards that can be paper thin up to 1/32" thick and 3/8", 13/16", 1-5/8" or 3" wide. Data cards are available at office supply stores. Use 3" x 5" index cards on RE90 material.



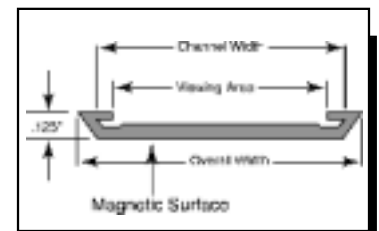
Write data on vinyl coating.



Apply adhesive-backed label.



Slide data cards into magnetic channel.



## DIMENSION CHART

Part #	Channel Width	View Area	Overall Width
RE10	0.400	0.320	0.475
RE20	0.825	0.650	0.950
RE40	1.700	1.475	1.830
RE90	3.000	2.862	3.125

Other sizes available.

# HIGH ENERGY MAGNETS

High energy flexible magnets are composed of a strontium ferrite powder mixture with polymer bonding. These magnets are most commonly found in the forms of strip and sheeting.

## MANUFACTURING

The material goes through a calendaring process and is formed into sheeting or strip. Then it can be easily machined to size and magnetized. High energy flexible magnets are anisotropic (oriented) where as the regular flexible material is not. Therefore, high energy magnets are limited to magnetization through the thickness, and are similar in strength to a Grade 1 ceramic magnet.

## ATTRIBUTES

- High resistance to demagnetization
- Free from chipping, cracking or shattering
- High energy product vs. regular flexible material
- Low curie point, not good in heat applications
- Easy fabrication and handling
- Inexpensive
- Adhesive or plain


## APPLICATIONS

- Motors, sensors, latches, magnetic assemblies

## TYPICAL MAGNETIC PROPERTIES OF HIGH ENERGY FLEXIBLE MAGNETS

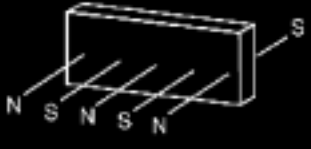
High Energy Flexible Material	Density		Maximum Energy Product	Residual Induction Br	Coercive Force Hc	Intrinsic Coercive Force Hci
(BH Max)	lbs/in <sup>3</sup>	g/cm <sup>3</sup>	MGO	Gauss	Oersted	Oersted
1.1	0.128	3.542	1.10	2200	1900	2400
1.2	0.128	3.542	1.20	2300	1950	2400
1.3	0.128	3.542	1.30	2350	2000	2900
1.4	0.128	3.542	1.40	2450	2100	2900

**THREE MAGNETIZATION PATTERNS**



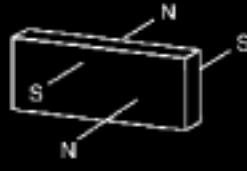
**CONVENTIONAL**

Conventional Magnetization: has one pole on each side of the magnet. North pole on one side, South pole on the other.

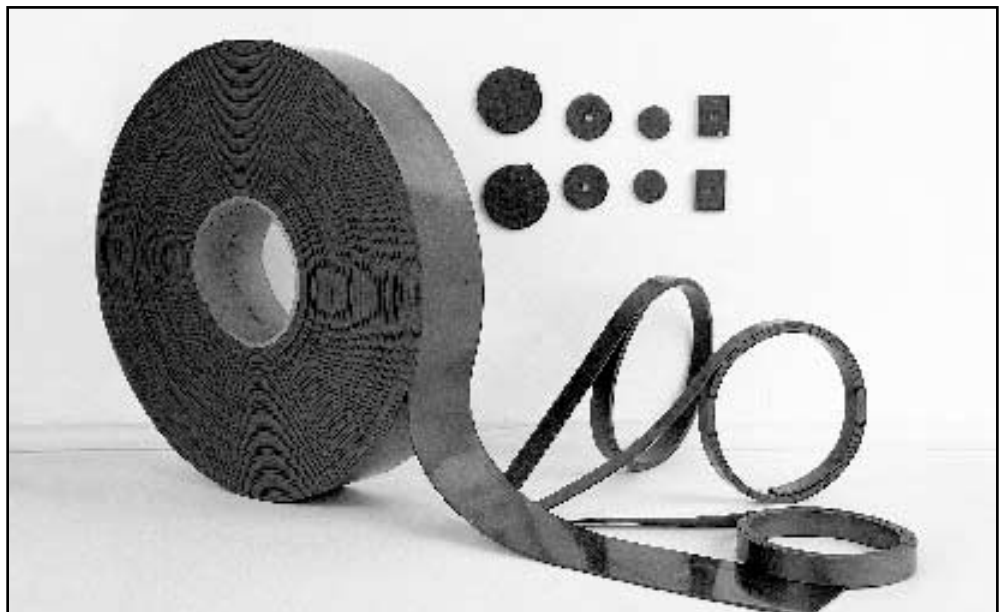


**MULTIPLE POLES (Standard)**

Multiple poles or two poles on each side: Two or more sets of poles on each surface are used in open circuit designs. North and South poles alternate through the thickness of the material. Steel backing is desirable where practical.



**TWO POLES ON EACH SIDE**





### ***Your best source in the magnetic field!***

*We have over 15 million magnets in stock. With state-of-the-art processing equipment, our flexible processing center in Ohio can cut, score, score-cut, die-cut, package, and ship your flexible magnet orders quickly and accurately.*

*Whether it's for flexible, ceramic, alnico, rare earth magnets, or magnetic assemblies, call us today for all your permanent magnet needs.*

---

## **Four locations to serve you!**

### **USA & International MASTER MAGNETICS, INC.**

607 S. Gilbert St.  
Castle Rock, CO 80104  
888-293-3534  
(303) 688-3966  
FAX: (303) 688-5303  
[www.magnetsource.com](http://www.magnetsource.com)

### **California & Hawaii A-L-L MAGNETICS, INC.**

930 S. Placentia  
Placentia, CA 92670  
800-262-4638  
(714) 632-1754  
FAX: (714) 632-1757  
[www.magnets-magnets.com](http://www.magnets-magnets.com)

### **Southeastern USA MIAMI MAGNET CO.**

6073 N.W. 167th Street, C26  
Miami, FL 33015  
800-222-7846  
(305) 823-0641  
FAX: (305) 823-1603

### **MASTER MAGNETICS EAST**

A Division of Master Magnetics, Inc.  
108 Industry Road  
Marietta, OH 45750  
Flexible Magnet Processing Center