

**Magnus<sup>®</sup>**  
steel strapping



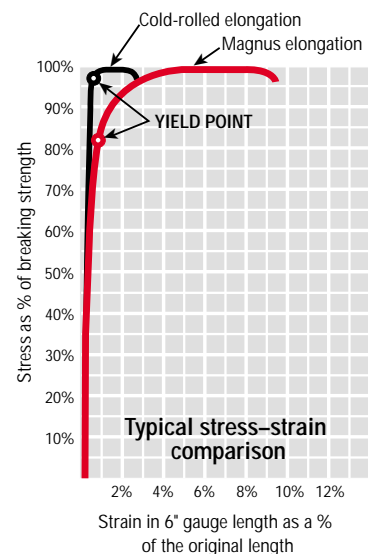
## Superior strap strength for the heaviest-duty applications

**M**agnus<sup>®</sup> is a cold-reduced, medium-carbon, high-manganese steel strapping that is heat-treated, using a Signode-developed process. The result—a product that combines the fine surface and controlled physical properties of cold-rolled strapping with ductility and excellent shock resistance.

Cold-rolling gives steel greater strength, permits much closer control of thickness, and provides a smoother surface. However, it reduces the ductility and the ability to elongate and absorb shocks. These properties are restored to Magnus strapping through a Signode heat-treating process. This process yields a superior quality, uniform strapping material with high strength, narrow tolerances, a high yield point, and sufficient ductility to be bent around sharp corners. Its elongation, in sizes normally used in rail carloading, meets the specifications of the Association of American Railroads (AAR).

In the chart to the right, the yield point of Magnus is compared to that of standard cold-rolled steel strapping. A strap's yield

point is the point at which it starts to stretch so much that it will not return to its original length when stress is removed. Compared to conventional cold-rolled steel strapping, Magnus's high yield strength allows it to elongate further without breaking to better absorb shocks during transit and handling.





## Tight tolerances

Magnus strapping is manufactured to strict specifications to ensure the best performance in Signode packaging systems. Our close gauge tolerance yields uniform, dependable strength. Close width tolerances generate uniform joint strengths in notch-type joints and make seal application easier. Magnus has more feet per pound and less variation in coil size, reducing coil changeovers. Its smooth surface increases rust resistance, is safer to handle and extends the service life of strapping tools. And with only 1/2" maximum curvature (camber) allowed in 8 feet (2.4m) of Magnus strapping, it is the preferred strapping for power strapping machines, power strap feeders and other applications requiring straight strapping.

## Strap finishes

Magnus steel strapping is available in three finishes:

- Painted finish, used in crimp-type seal systems, generates high joint strength.
- Painted and waxed coating facilitates tension transmission around load corners and provides corrosion resistance. It can be used in both crimp and notch-type joints. Waxed strapping is required for feed-wheel type tensioners.
- Zinc waxed coating increases tension transmission and provides outstanding resistance to rust.

## Uniform strength

Together, Signode's close manufacturing tolerances, stringent quality control and strap manufacturing experience combine to produce a uniform, high strength, ductile strapping material. These qualities may enable you to use a lighter Magnus strap with lower material costs and less tare weight to save you money on your packaging specifications.

## Excellent tension

Magnus's hard, smooth, low-friction surface enables you to pull straps tighter around corners to obtain more uniform tension distribution.

## Superior joint strength

Magnus strap specifications are coordinated with the design of Signode tools and seals to produce optimum results when used together.

## Consistent supply

Magnus strapping is manufactured in ten Signode plants around the world—three in the U.S.A. (Baltimore, Bridgeview and Pittsburg) and in Brazil, Germany, India, Italy, Mexico, Sweden and Wales. An eleventh Magnus manufacturing facility will open in Australia by 2001. Each plant has its own independent sources of steel. Therefore, any Signode distribution point, anywhere in the world, is likely to have sufficient Magnus strapping to meet your needs.

Magnus Strap Size				Average Strength*		Yield		Coil Winding	Coil Weight lbs	Strap Finish
Width		Thickness								
inch	mm	inch	mm	lbs	N	ft/lb	M/kg			
1/2	12.7	.020	0.51	1,525	6 780	29.4	19.8	Mill	105	Painted & Waxed, Zinc
		.023	0.58	1,750	7 780	25.6	17.2	Mill	105	Painted & Waxed
5/8	15.9	.020	0.51	1,900	8 450	23.6	15.9	Mill	105	Painted & Waxed, Zinc
		.023	0.58	2,175	9 670	20.5	13.8	Mill	105	Painted & Waxed, Zinc
3/4	19.0	.020	0.51	2,250	10 010	19.6	13.2	Mill	105	Painted & Waxed
		.023	0.58	2,600	11 560	17.1	11.5	Mill	105	Painted & Waxed
		.025	0.64	2,800	12 450	15.7	10.5	Mill, Ribbon	105, 75	Painted & Waxed, Zinc
		.031	0.79	3,450	15 350	12.7	8.5	Mill, Ribbon	105, 75	Painted & Waxed, Zinc
1-1/4	31.8	.025	0.64	4,650	20 680	9.4	6.3	Ribbon	110	Painted & Waxed
		.029	0.74	5,400	24 020	8.1	5.4	Ribbon	110	Painted & Waxed, Zinc
		.044	1.12	7,900	35 140	5.3	3.6	Ribbon	110	Painted & Waxed
2	50.8	.044	1.12	12,500	55 600	3.3	2.2	Ribbon	120	Painted, Painted & Waxed

\*Average strength: The average strength for each strap size was calculated from a large number of tests. The strength of a particular strap sample may be above or below the listed strength.



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