

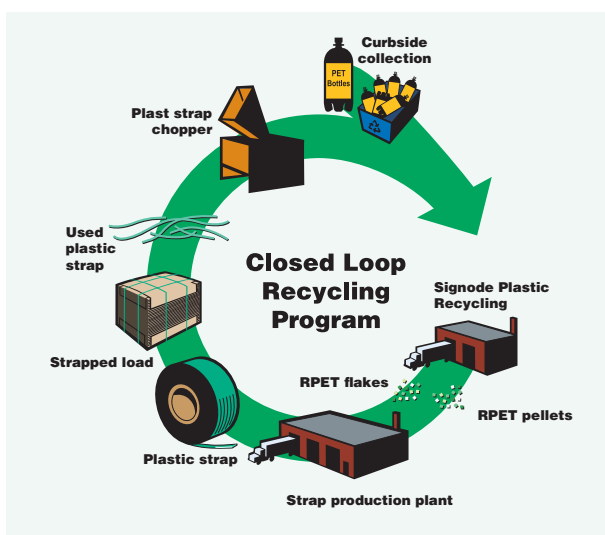
Four types for a wide range of applications

Signode plastic strapping is manufactured for use with hand tools and high-production power strapping machines. All types have controlled surface properties that minimize tensioning effort, increase tension-transmission around corners and improve operating efficiency. All are split-resistant to increase

reliability in tools and power equipment.

Specifications for all varieties of Signode plastic strapping along with general methods of application for each type are detailed in the following tables.

Tenax Strapping	Dymax Strapping	Contrax Strapping	Empax Strapping
<p>Tenax polyester strapping can be tensioned to a higher percentage of its break strength than any other strapping material. It provides superior retained tension under hot, humid conditions and is more resistant to such environments than other plastic strapping. It also provides greater load stability during storage and shipping.</p> <p>Tenax strap is strong, yet resilient enough to perform smoothly and reliably in power strapping machines and hand tools. And it's more tear and snag resistant than other plastic strapping.</p>	<p>Dymax strapping is oriented during manufacturing, making it six times stronger than ordinary nylon. Ideal for use in cold room applications, such as food processing, it resists tension decay and provides better reinforcement over long storage periods.</p> <p>Dymax strapping stays tight. It conforms to changes in load size and shape without sacrificing its reinforcement capabilities. A smooth, lubricated finish helps ensure reliable feeding through feedwheel-type strapping equipment.</p>	<p>Contrax polypropylene strapping is a good choice for light and medium-duty applications, including palletizing, unitizing, bundling, carton closure and reinforcement. It resists splitting and has a smooth, uniform surface so it performs reliably in power strapping machines.</p> <p>Contrax strapping has "elastic memory" which absorbs shock and keeps strapping tight during handling and shipping.</p>	<p>Empax waffled strapping is designed to perform in hot-knife sealing machines that require embossed strapping. It is a good choice for many light and medium-duty applications. A variety of coil sizes are available for use in many power strapping machines.</p> <p>Empax has "elastic memory" to keep straps tight, and features consistent width and gauge control to run smoothly in your strapping machine. It is an economical choice for many applications.</p>
 <p>Tenax®</p>	 <p>Dymax™</p>	 <p>Contrax®</p>	 <p>Empax™</p>



Plastic Strap Recycling Program

Signode is committed to being a leader in sustainability for the packaging industry. In addition to our ongoing development of higher strength, lower weight strapping to reduce raw material requirements, we also operate a strap reclamation program.

Our Closed Loop Recycling Program, aimed at limiting waste, collects our customers' used green PET strapping for use in the manufacture of new strapping. As a result of our recycling operation, Signode Tenax strapping contains more than 85% recycled content.

Plastic Strapping



Strap Name	Strap Color	Part Number	Strap Size		Average Strength*		Approx. Coil Length		Approx. Coil Width		Approx. Coil Outside Dia.		Core Size Inside Dia.		Coil Weight lbs	Standard Coils/Pallet	Strap Application Method
			Width		lbs	N	ft	m	inch	mm	inch	mm	inch	mm			
			inch	mm													

Tenax® Sheet Strapping

1612	Green	2X2218	3/8	9	260	1 157	18,000	4 877	6	152	24	609	16	406	49	24	MH-BGU MHB-TP12 GCU SmartFlex MCD Power strapping machines Pneumatic or battery powered friction-weld tools Hand tools using metal seals						
1614S		2X2226			300	1 334	18,000	4 877							54	24							
1616ELC		2X2015			425	1 890	14,500	4 420							57	12							
1616SC		2X2209			425	1 890	11,500	3 505							6	152		24	609	16	406	46.6	24
1616X		2X2255			385	1 712	15,500	4 724							6	152		24	609	16	406	56.3	24
1716LC		2X1488	7/16	10.5	475	2 110	11,550	3 520	6	152	24	609	16	406	55	24							
1718		2X1749			600	2 670	9,600	2 926							55	24							
1718LC		2X1498			550	2 450	9,900	3 445							53	—							
1816		010379	1/2	12	500	2 220	10,500	3 200	6	152	24	609	16	406	51	12		MOD-710 Power strapping machines MH-VM Power strapping machines Pneumatic or battery powered friction-weld tools Hand tools using metal seals					
1818†		010361			600	2 669	9,000	2 743							51	12							
1822†	010355	800			3 560	6,500	1 980	50							—								

Smooth High-strength Tenax® Strapping

2030	Green	2X1365	5/8	15.6	1,100	4 890	4,600	1 404	6	152	24	609	16	406	48	24	Power strapping machines Pneumatic and battery powered hand tools Hand tools using metal seals up to 5/8" (15.9 mm)
2040**†	Green	2X1369			1,400	6 227	4,000	1 219	6	152	24	609	16	406	49	24	
2040**	Green	2X2222			1,400	6 227	4,000	1 219	6	152	24	609	16	406	49	24	
2040HG	Green	2X1889			1,400	6 227	4,000	1 219	6	152	24	609	16	406	49	24	
2040J**	Green	2X1474			1,400	6 227	12,500	3 810	7.5	190	24	609	16	406	153	4	
2040H**	Green	2X1460			1,600	7 117	4,000	1 219	6	152	24	609	16	406	56	24	
2220**	Green	2X1888	3/4	19	1,900	8 451	3,000	914	6	152	24	609	16	406	52	24	Hand tools using metal seals up to 5/8" (15.9 mm)
2225**†		2X1847			2,500	11 120	2,400	732	6	152	24	609	16	406	52	24	
2480**	Green	2X1851	1	25	2,200	11 120	2,200	671	6	152	24	609	16	406	50	24	Hand tools using metal seals up to 5/8" (15.9 mm)
10050**		2X1842			3,000	13 344	1,800	549	6	152	24	609	16	406	52	24	
2680**	Green	2X2207	1-1/4	32	3,200	14 234	1,800	549	6	152	24	609	16	406	52	24	Hand tools using metal seals up to 5/8" (15.9 mm)
2625**		2X2208			4,000	17 792	1,500	457	6	152	24	609	16	406	54	24	

Embossed Tenax® — polyester

3/8X017 EMB	Green	1935010L	3/8	9	360	1 601	13,500	4 115	6	152	24	609	16	406	50	24	Hand tools using buckles Pneumatic or battery powered friction-weld tools
3/8X020 EMB		1935002			470	2 091	12,500	3 801	6	152	24	609	16	406	50	24	
7/16X022 EMB	Green	2X2230	7/16	10.5	550	2 224	10,500	3 200	6	152	24	609	16	406	50	24	Hand tools designed specifically for use with Tenax
1/2X022 EMB	Green	2X2247	1/2	12	625	2 780	9,300	2 835	6	152	24	609	16	406	49	24	Hand tools using metal seals Pneumatic or battery powered friction-weld tools
1/2X028 EMB		2X2228			800	3 336	7,200	2 195	6	152	24	609	16	406	50	24	
5/8X040 AAR EMB	Green	2X2242	5/8	15.6	1,600	7 117	4,000	1 219	6	152	24	609	16	406	49.1	24	Hand tools using metal seals Pneumatic or battery powered friction-weld tools Hand tools designed specifically for use with Tenax
2040D AAR EMB																	

High-strength Tenax® Embossed — polyester

5/8X030 EMB	Green	2X2232	5/8	15.6	1,100	4 893	4,600	1 402	6	152	24	609	16	406	42	24	Hand tools using metal seals Pneumatic or battery powered friction-weld tools Hand tools designed specifically for use with High-strength Tenax
2040 EMB		2X2011 EMB			1,300	5 782	4,000	1 219	6	152	24	609	16	406	45	24	
2040 EMB AAR		2X2229**			1,400	6 227	4,000	1 219	6	152	24	609	16	406	46	24	
2X2237**		2X2237**			1,600	7 117	4,000	1 219	6	152	24	812	16	406	49	24	
3/4X040 EMB		2X2233			1,900	8 451	3,000	914	6	152	24	609	16	406	46	24	

* Strap break strengths are listed as averages. Always use American Society for Testing Materials (ASTM D-3950) minimum break strengths for package design/safety factor purposes. For proper strap selection, contact your Signode sales representative.

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Strap Name	Strap Color	Part Number	Strap Size		Average Strength*		Approx. Coil Length		Approx. Coil Width		Approx. Coil Outside Dia.		Core Size Inside Dia.		Coil Weight lbs	Standard Coils/Pallet	Strap Application Method
			Width		lbs	N	ft	m	inch	mm	inch	mm	inch	mm			
			inch	mm													
Dymax® Strapping — nylon																	
304	Black	025512	7/16	12.0	630	2 800	9,000	2 740	6	152	24	609	16	406	44.5	10	Pneumatic or battery powered friction-weld tools
306		025567	7/16	12.0	790	3 510	7,200	2 190	6	152	24	609	16	406	44.5	10	
502		025571	1/2	12.7	475	2 110	12,000	3 660	6	152	24	609	16	406	44.5	10	Hand tools using metal seals (50SL or 50DL Buckles w/ 502 Dymax)
504		025583	1/2	12.7	630	2 800	9,000	2 740	6	152	24	609	16	406	44.5	10	
506		025595	1/2	12.7	790	3 510	7,200	2 190	6	152	24	609	16	406	44.5	10	Pneumatic or battery powered friction-weld tools
508		025574	1/2	12.7	950	4 230	6,000	1 830	6	152	24	609	16	406	44.5	10	
Light Duty Contrax																	
LD213	Clear	2X1602	1/4	6	145	640	21,000	5 793	6	152	16	406	4	102	26	30	ML Power strapping machines
LB 112	Clear	2X1844	3/16	5	100	445	30,000	9 146	7.8	198	16	406	7.8	200	28	36	LBX PSM MOD-GPX
LB 112	Yellow	2X1870															
LB 212	Clear	2X1845	1/4	6	150	667	24,000	7 317	7.8	198	16	406	7.8	200	27	36	LBX PSM MOD-GPX
LB 212	Yellow	2X1848															
LB 113	Clear	2X1601	3/16	5	120	530	25,000	7 622	7.8	198	16	406	7.8	200	28	36	LB, SP & SureTyer PSM
LB 113	Yellow	2X1709**															
LB 116	Clear	2X1875			150	667	23,000	7 010	7.8	198	16	406	7.8	200	29		
SP 216	Clear	2X1606	1/4	6	200	890	18,000	5 488	7.8	198	16	406	7.8	200	27	36	LB & SureTyer PSM
SP 216	Yellow	2X1607															
General Duty Contrax																	
HB 612	Clear	2X1738	3/8	9	225	1 000	16,000	4 878	7.8	198	16	406	7.8	200	29	36	HBX PSM
HB 612	Black	2X1727															
HB 812	Clear	2X1885	1/2	12	300	1 330	12,000	3 659	7.8	198	16	406	7.8	200	27	36	HBX PSM MOD-GPX
HB 812	Black	2X1886															
SP 616	Clear	2X1608	3/8	9	300	1 330	12,000	3 659	7.8	198	16	406	7.8	200	27	36	HB, SP & SureTyer PSM
SP 616	Black	2X1609															
SP 719	Clear	2X1614	7/16	10.5	400	1 780	9,000	2 744	7.8	198	16	406	7.8	200	28	36	HB, SP & SureTyer PSM
SP 719	Black	2X1615															
SP 723	Clear	2X1616	7/16	10.5	500	2 220	7,500	2 287	7.8	198	16	406	7.8	200	28	36	HB, SP & SureTyer PSM
SP 723	Black	2X1617															
Heavy Duty Contrax																	
HD 719	Clear	2X1610	7/16	10.5	400	1 780	12,000	3 659	6	152	24	609	16	406	39	24	MH-VM Pneumatic friction-weld tools Battery powered tools
HD 723	Black	2X1613			500	2 220	9,000	2 744							34		
HD 729		2X1622			600	2 670	7,700	2 348							37		
816	Black	010366	1/2	12	500	2 220	8,000	2 439	6	152	24	609	16	406	32	24	Hand tools using metal seals Pneumatic or battery powered friction-weld tools

* Strap break strengths are listed as averages. Always use American Society for Testing Materials (ASTM D-3950) minimum break strengths for package design/safety factor purposes. For proper strap selection, contact your Signode sales representative.

** Reflectors

Strap Name	Strap Color	Part Number	Strap Size		Average Strength*		Approx. Coil Length		Approx. Coil Width		Approx. Coil Outside Dia.		Core Size Inside Dia.		Coil Weight lbs	Standard Coils/Pallet	Strap Application Method
			inch	mm	lbs	N	ft	m	inch	mm	inch	mm	inch	mm			
			Empax™ Strapping - polypropylene														
5mm AMS 125	White	373.605.570 BP	0.181	5	127	564	12,000	3 659	7.5	191	16.7	424	8	203	22.9	30	Hot-Knife sealing power strapping machines that require embossed strapping
3/8" Superflex	Black	323.109.539	0.346	9	200	888	9,000	2 744	7.5	191	15.7	399	8	203	24.6	24	
3/8" AMS 250	White	M09250WH8	0.346	9	250	1 110	7,700	2 348	7.5	191	19.9	505	8	203	21.5	24	
3/8" AMS 250	White	M09250WH9	0.346	9	250	1 110	23,000	7,010	7.5	191	19.9	505	9	229	21.5	24	
1/2" AMS 350	White	M12350WH8	0.461	12	350	1 554	12,900	3,932	7.5	191	17.2	437	8	203	22	24	
1/2" AMS 350	White	M12350WH9	0.461	12	350	1 554	12,900	3,932	7.5	191	17.2	437	9	229	22	24	
1/2" AMS 500	White	M12501WH8	0.461	12	500	2 220	12,900	3,932	7.5	191	17.1	434	8	203	23.9	24	
1/2" AMS 500	Black	M12501WH6-7500	0.461	12	500	2 220	9,900	3,018	6	152	24.6	625	16	406	24.9	24	
1/2" AMS 600	Black	M12600BK6-7500	0.461	12	600	2 664	9,900	3,018	6	152	25.5	648	16	406	29.5	24	
Hand Grade 300 lb	Black	H12300BK6	0.472	12	300	1 332	7,200	2,195	6	152	24	610	16	406	22	24	
Hand Grade 500 lb	Black	H12500BK6	0.472	12	500	2 220	7,500	2,286	6	152	25	635	16	406	28	24	
Hand Grade 600 lb	Black	H12600BK6	0.472	12	600	2 664	7,500	2,286	6	152	25	635	16	406	33	24	

Seals & Buckles

Plastic joint types

Normal packaging rates for any application influence both the choice of strap and its joining methods. For low-volume, low-tension strapping of lightweight packages or bundles, Signode Steelock™ or Dylock™ buckles are probably the most economical method of joining strap, since they require no special sealing tool.

Seal Name	Part Number	Seal Type	Seal Length		Strap Size		Tool Name	Approx. Shipping Weight		Standard Package
			inch	mm	inch	mm		lbs	kg	
Dylock™ & Steelock™ buckles										
50 DL	000470	Dylock	20.6	.885	1/2	12	DLT	23	10.4	5,000
50 SL	000472	Steelock	23.8	.937	1/2	12	DLT	52	23.6	2,500



Seals for hand tool application

All types of 12mm Signode plastic strapping as well as 16mm and 19mm High-Strength Tenax strapping can be sealed with hand tools using metal seals. Signode manufactures snap-on seals for manual sealers and Nestack seals for use in combination strapping tools with seal magazines.

Snap-on seals

Signode snap-on seals use a grit coating on the inside to increase friction between the strapping and the seals. Snap-on seals are placed on overlapping strap ends during or after strap tensioning. These seals generally reduce application time.

Seal Name	Part Number	Seal Type	Seal Length		Strap Size		Tool Name	Approx. Shipping Weight		Standard Package
			inch	mm	inch	mm		lbs	kg	
Snap-on seals										
50 DVS	000465	Grit	3/4	19.0	1/2	12	D-504	40	18.1	3,100
50 DY	000466		1-1/8	28.3	1/2	12	D-504, D-506	42	19.1	2,500
58 DY	2X1672		1-1/2	38.1	5/8	16	D-58	28	12.7	1,000
34 DY	2X1795		2-1/8	55.9	3/4	19	M 380	45	20.4	1,000



Nestack® seals

Nestack seals use steel teeth to grip the strapping. They are stacked and held together by plastic filaments. Designed for use in seal magazines of combination strapping tools, they are packaged in trays that can be conveniently placed at any strapping station.

Seal and joint strength

To ensure positive joint strength on all four types of plastic strapping, Signode steel seals and special sealers are used to form crimp joints. Crimp joints are formed by compressing the seal onto overlapping straps. The holding power of the joint is generated by squeezing the straps and the seal together.

Seal Name	Part Number	Seal Type	Seal Length		Strap Size		Tool Name	Approx. Shipping Weight		Standard Package
			inch	mm	inch	mm		lbs	kg	
Nestack seals										
50 ASD	000531	Serrated	1-1/8	28.3	1/2	12	AMPT-12, AST	41	18.6	2,000
58 AMT	2X1303		1-1/8	28.3	5/8	16	AMT-58	33	15.0	1,440



Friction-weld® sealless joint

The Friction-weld® process, developed by Signode, positively joins plastic strapping without the use of seals or applied heat.