



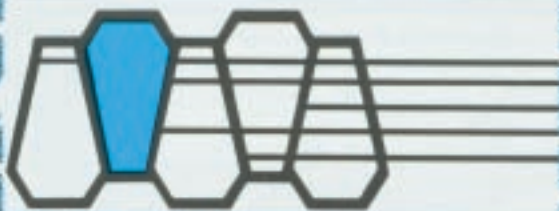
BUYER'S GUIDE

CORDS

TWINES

LACING TAPES

For Electronic &
Electrical Harnessing

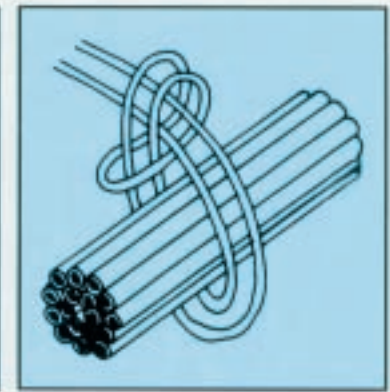
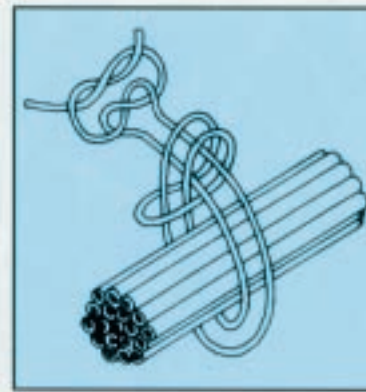
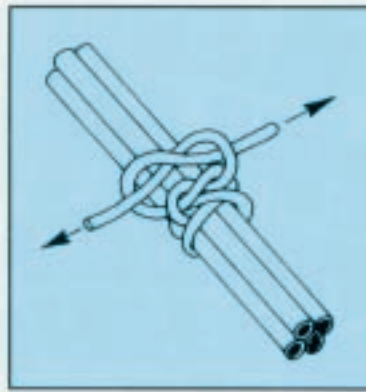
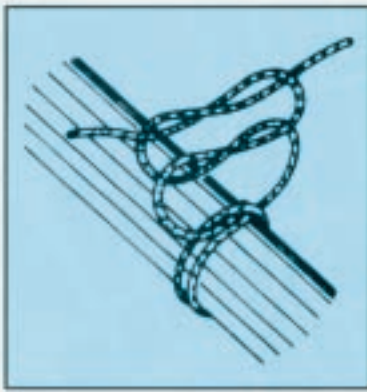


**western
filament, inc.**

970-241-8780

FAX: 970-241-8682





**Western Filament lacing tapes are flat braided
yarns in accordance with MIL-T-43435, and m**

TO ORDER, THE FOLLOWING IS REQUIRED

TYPE I

NYLON LACING TAPES

Type I lacing tapes are braided of high tenacity nylon (polyamide) yarns impregnated with an appropriate finish. Approximate operating temperature range is -67°F (-55°C) to 325°F (162°C). Standard colors are Natural and Black; special colors on request.

Western Filament Part Number	Mil Spec Size	Width Inches ± 10%	Thickness ± 0.003"	Min. Break Strength (lbs)	Spool Size (yds)
150NOF29	1	.200	.016	135	250
80NOF29	2	.110	.015	80	250
50NOF17	3	.085	.014	50	500
35NOF13	4	.060	.012	25	500
25NOF9	5	.050	.010	15	500
15NOF9	—	.040	.012	15	500

AVAILABLE FINISHES:

- Uncoated (MI-Spec: A)
 Wax (MI-Spec: B)
 Synthetic Elastomer (MI-Spec: C)
 Vinyl Chloride (MI-Spec: E)
 Liquid Nylon (MI-Spec: G)
- Synthetic Rubber (MI-Spec: C)

TYPE II

POLYESTER LACING TAPES

Type II lacing tapes are braided of high tenacity polyester yarns, impregnated with an appropriate finish. Approximate operating temperature range is -100°F (-73°C) to 350°F (177°C). Standard colors are Natural and Black; special colors on request.

Western Filament Part Number	Mil Spec Size	Width Inches ± 10%	Thickness ± 0.003"	Min. Break Strength (lbs)	Spool Size (yds)
145DOF29	1	.200	.016	135	250
80DOF29	2	.110	.015	80	250
50DOF17	3	.085	.014	50	500
35DOF13	4	.060	.012	25	500
20DOF9	5	.050	.010	15	500
15DOF9	—	.040	.012	15	500

AVAILABLE FINISHES:

- Uncoated (MI-Spec: A)
 Wax (MI-Spec: B)
 Synthetic Elastomer (MI-Spec: C)
 Vinyl Chloride (MI-Spec: E)
 Synthetic Rubber (MI-Spec: C)

TYPE III

TEFLON LACING TAPES

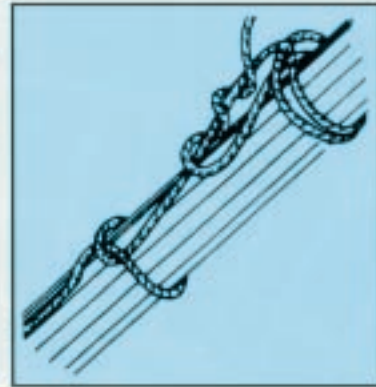
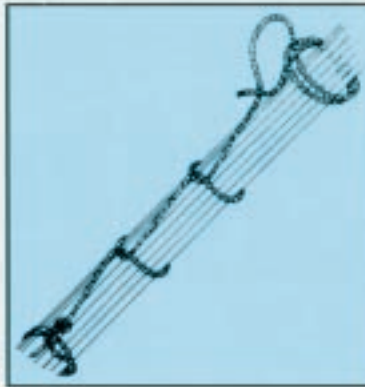
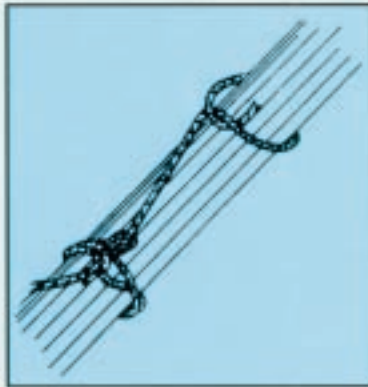
Type III lacing tapes are braided of Teflon (TFE-fluorocarbon) yarns, highly resistant to fuels and chemicals; recommended for hard vacuum/low outgassing applications. Approximate temperature range is -100°F (-73°C) to 450°F (232°C). Standard color is Dark Brown.

Western Filament Part Number	Mil Spec Size	Width Inches ± 10%	Thickness ± 0.003"	Min. Break Strength (lbs)	Spool Size (yds)
35TOF29	2	.120	.011	30	250
15TOF13	4	.065	.011	15	500
10TOF9	5	.025	.011	10	500

AVAILABLE FINISHES:

- Uncoated (MI-Spec: A)
 Synthetic Elastomer (MI-Spec: C)

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is manufactured from continuous filament
all other industry lacing tape specifications.

D: TYPE - SIZE - FINISH - COLOR

TYPE IV

TEFLON COATED FIBERGLASS LACING TAPES

Type IV lacing tapes are braided of glass yarns individually coated with Teflon (Tetrafluoro carbon) Mil-Spec D finish before braiding. An additional coating must be specified if knot holding or fray resistance is required. These high temperature and fluid resistant tapes are recommended for hard vacuum/low outgassing applications. Approximate temperature range is -100°F (-73°C) to 800°F (427°C) Standard color is White. Black available upon request.

Western Filament Part Number	Mil Spec Size	Width Inches ± 10%	Thickness ± 0.003"	Min. Break Strength (lbs)	Spool Size (yds)
275LOF29	1	.225	.016	200	250
190LOF21	2	.110	.016	100	250
100LOF15	3	.085	.016	75	500
60LOF13	4	.060	.016	50	500
50LOF9	5	.050	.016	—	500

AVAILABLE FINISHES:

- Uncoated (Mil-Spec: D)
 Wax (Mil-Spec: B)
 Silicone (Mil-Spec: F)
 Synthetic Elastomer (Mil-Spec: C)
 Vinyl Chloride (Mil-Spec: E)
- Synthetic Rubber (Mil-Spec: C)
 G / A Vinyl Chloride Over Synthetic Rubber

TYPE V

NOMEX LACING TAPE

Type V lacing tapes are braided of high temperature Nomex® aramid fibers and impregnated with an appropriate finish. Approximate operating temperature is -100°F (-73°C) to 500°F (260°C). Standard color is White, others available upon request.

Western Filament Part Number	Mil Spec Size	Width Inches ± 10%	Thickness ± 0.003"	Min. Break Strength (lbs)	Spool Size (yds)
130HOF25	1	.200	.016	85	250
70HOF25	2	.110	.014	50	250
40HOF17	3	.075	.012	35	500
30HOF13	4	.055	.010	25	500
20HOF9	—	.040	.008	15	500

AVAILABLE FINISHES:

- Uncoated (Mil-Spec: A)
 Wax (Mil-Spec: B)
 Synthetic Elastomer (Mil-Spec: C)
 Silicone (Mil-Spec: F)
 Liquid Nylon (Mil-Spec: G)
- Synthetic Rubber (Mil-Spec: C)

Coatings & Finishes Available

HOW TO ORDER:

Example: Mil-T-43435

Type 1/Size 3 Finish C Color Black

50NOF17



W.F. Part #

G



Coating

Blk



Color

Mil Spec. Finish Designation	Western Filament Designation	Coating Type	% Coating (by weight)
A	X	Uncoated	0
B	W	Wax	15-32
C	G	Synthetic rubber (std)	7-17
	R	Synthetic rubber for thermal vacuum stability requirement	
D	LOF	Yarns impregnated with Teflon before braiding	10-20
E	A	Vinyl chloride	15-30
F	S	Silicone resin	7-17
G	N	Liquid nylon	4-14

⊛ AVAILABLE WITH FR FORMULATION OF THE COATING.

Types of Lacing and Spot Tying Materials

For Aircraft, Electrical, Electronic and Space Vehicle Harnessing

FLAT BRAIDED TAPES

Per MIL-T-43435



Flat Braided Tapes are "second generation" lacing/spot tying construction. They are designed to provide maximum strength with minimum space requirements. Other advantages include increased gripping area and superior impregnation characteristics. Flat braided tapes are specified for most military and space oriented applications, and are currently finding increased usage among commercial, electrical and electronic manufacturers.

ROUND TWISTED TWINES

Per MIL-T-713



Round twisted constructions are used primarily by electrical and "non-flight" hardware producers. Primary advantages include low costs and established industry acceptance. Though round twisted constructions provide less "gripping" area on the bundle, and do not accept impregnation as completely as flat tapes, they still enjoy continued widespread usage throughout the industry.

NON-BRAIDED FLAT TAPES



Not to Military Specifications
Nylon Mono-Ty constructions provide a low cost non-braided material for use in commercial electronics and non-flight hardware. Oriented Nylon fibers are formed into a flat ribbon-like construction and impregnated with microcrystalline wax. Mono-ty constructions exceed IBM 147440, and similar industry requirements.

MIL-T-713 TYPE P

NYLON LACING TAPE

These round cords are twisted from high tenacity continuous filament nylon yarns. In addition to the microcrystalline fungicide wax finish specified in MIL-T-713, other finishes are available on request. Standard colors are Natural and Black.

Western Filament Part Number	Mil Spec Size	Min. Break Strength	Yield yds/lb Waxed/Urwaxed	Spool Size (yds)
70NOZ3	1	70	550/650	1 lb
48NOZ3	2	48	750/950	1 lb
32NOZ3	3	32	1100/1400	1 lb
20NOZ2	special	20	1975/2400	1 lb

MONO-TY

A low cost, non-braided, wax impregnated lacing tape for use in commercial harnessing applications. Approved on IBM #147440 and other industry specifications.

Western Filament Part Number	Min. Break Strength (lbs)	Yield yds./lbs	Spool Size (yds)
80NOS1W	80	540	1 lb
70NOS1W	70	580	1 lb or 750 yds
50NOS1W	50	820	1 lb
35NOS1W	35	1,240	1 lb



western filament, inc.

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WESTERN FILAMENT

One Single Source for Literally Hundreds Of Different Wire Harnessing Products

- Lacing Tape
- Braided Sleeves
- Braided Cords
- Twisted Products
- Flat Braided Tapes
- Braider Yarn on Cops
- Expandable Sleeving

We Built A New Facility For New Products, New Materials and New Technology

We have invested over \$3 million dollars developing what we sincerely feel is the finest textile braided product manufacturing and fabrication operation in the country. We do all of our own dyeing, coating and finishing in-house. Our textile and mechanical engineers are working with the world's most technologically advanced fibrous materials and coatings. We're developing new products made from Kevlar[®], Dupont[®], Nomex[®], Spectra[®] fibers, Ceramic fibers and Carbon yarns.

We Understand These New Materials And The Technology That Goes With Them

That's why Western Filament has been specifically contracted to research and develop a number of exciting new products for applications that range from the bottom of the ocean to outer space.

Many of these new combinations of fibers, braids, plies and coatings have come about because a customer needed a product that was unique and we were able to design and manufacture it.

We Engineer And Manufacture To A Wide Variety Of Specifications Including:

- NEMA Specs
- UL/CSA
- NASA
- Individual Customer Specs
- DOD

On-Time Delivery Of The Finest Products Available

Every product we manufacture is tested and evaluated to insure conformance to the strictest industry standards. When you place an order with Western Filament, you can be assured that we'll meet your delivery date, and give you the finest product available at a competitive price.

You don't have to coordinate three or four suppliers to get your harnessing products. You just have to make one phone call to the only single source...

...WESTERN FILAMENT.



Western Filament

Is Your Only Single Source For Top Quality, Value Added, Braided Products.

Industrial

- Motor-Ty Tapes
- Motor-Ty Cords
- Surge Rope

Recreational

- Fish Line • Bow String
- Kite Line

Electronics/Aerospace

- Mil-Spec Lacing Tapes
- Expand-A-Flex Sleeving
- Ceramic Sleeveings
- Special Constructions
- Parachute Cord

Custom Engineered Products



Quality Assurance Program

in Conformance with MIL-I-45208.

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