

Western Filament: Lacing Cords and Tapes

Lacing cords and tapes are produced from various materials to provide properties required. Cords are twisted fibers and usually with a treatment to reduce unraveling or fraying. Tapes are flat braided or woven and impregnated with appropriate finishes to meet specifications. Treatments include wax, oil or others as required. A heat shrinkable polyester tape is also available

have good knot holding properties which is necessary when doing lashing of motor coils, holding leads in position or on general electronic lacing work.

Cords and tapes have high tensile strength, making them ideal for harnessing purposes. Treated types

Types of Lacing and Spot Tying Materials

Flat Braided Tapes

Per AA-52080 – AA-52084 (formerly MIL-T-43435)

Flat Braided Tapes are “second generation” lacing/spot tying construction. They are designed to produce maximum strength with minimum space requirements. Other advantages include increased gripping and superior impregnation characteristics. Flat braided tapes are specified to for most military and aerospace 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 flat ribbon-like construction and impregnated with microcrystalline wax. Mono-ty constructions exceed IBM 147440, and similar industry requirements.



Fiberglass Lacing Tape (Class H)

-Suggested Coatings: Polyurethane, Silicone

Fiberglass is the industry standard for "Class H" applications and is strong, heat resistant and non-flammable. Fiberglass maintains 75% of its tensile strength at 650°F and is highly resistant to acids and alkalies. It is available in a variety of flat braided constructions.

Part Number	Width Inches	Thickness Inches	Nominal Break (Lbs.)	Spool Size
FST0	.220	.017	250	250 yds.
FST1	.180	.010	170	250 yds.
FST2	.150	.010	150	250 yds.
FST3	.100	.010	110	500 yds.

Polyester Lacing Tape (Class F)

-Typical shrinkage 10-11% at 325°F/1hr

-Suggested Coatings: Polyurethane, Wax, Untreated (Hermetic Applications)

High tenacity continuous filament braided polyester yarn. Western Filament's DHS tape minimizes snagging, improves the insulation bond, and when coated will not frizz, fray or unravel. Standard colours are Natural and Black.

Part Number	Width Inches	Thickness Inches	Nominal Break (Lbs.)	Spool Size
DHS00	.500	.025	700	250 ft.
DHS0	.375	.020	410	250 yds.
DHS1	.225	.015	190	250 yds.
DHS2	.125	.010	100	250 yds.
DHS3	.080	.010	60	500 yds.
DHS4	.062	.010	45	500 yds.
DHSXT0	.250	.015	240	250 yds.
DHS170	.100	.030	190	-

Nomex® Lacing Tape (Class H)

-Suggested Coatings: Polyurethane, Untreated

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 colour is White; special colours available upon request. Dupont's aramid fibers are braided into a smooth flat tape, which is stable at high temperatures, self-extinguishing and suitable for hermetic or conventional applications.

Part Number	Width Inches	Thickness Inches	Nominal Break (Lbs.)	Spool Size
NFB0	.300	.016	120	250 yds.
NFB1	.225	.016	85	250 yds.
NFB2	.110	.015	50	250 yds.
NFB3	.075	.010	35	500 yds.

Kevlar® Lacing Tape (Class H)

-Suggested Coatings: Polyurethane, Untreated

A high temperature, high strength material from DuPont. Kevlar® provides the advantages of fiberglass without causing skin irritation and processing problems. Kevlar is approximately four times stronger than Nomex® and will retain 90% of its strength at 482°F

Part Number	Width Inches	Thickness Inches	Nominal Break (Lbs.)	Spool Size
KST00	.500	.030	1750	125 yds.
KST0	.375	.026	1500	250 yds.
KST1	.225	.014	372	250 yds.
KST2	.125	.010	237	250 yds.
KST3	.080	.010	137	500 yds.

Polyester/Fiberglass Lacing Tape (Class F Plus)

-Suggested Coatings: Polyurethane, Untreated

Fiberglass strands are run axially through a flat braided polyester tape to provide extra strength and a thermal overload factor for "Locked-Rotor" and temporary overloads which exceed the softening point of polyester. The softer polyester fibers surround the fiberglass strands to minimize skin irritation and processing problems.

Part Number	Width Inches	Thickness Inches	Nominal Break (Lbs.)	Spool Size
PGS-0	.250	.022	200	250 yds.
PGS-1	.215	.021	175	250 yds.
PGS-2	.150	.021	130	250 yds.

Lacing Tapes Cross Reference Chart

Product	Breyden Part No.	Western Filament Part No.
Nylon	101	150NOF29
	102	80NOF29
	103	50NOF17
	104	35NOF13
	105	25NOF9
Polyester	201	150DOF29
	202	80DOF29
	203	50DOF17
	204	35DOF13
	205	25DOF9
Nomex	501	130HOF29
	502	70HOF25
	503	40HOF17
	504	30HOF13
	505	20HOF9

