

Lacing Tape Cords and Yarns General Information



We offer a comprehensive range of high performance lacing tapes, cords and braiding yarns, used throughout the aerospace, electronics, medical and many smaller specialist manufacturing industries. The lacing tapes are manufactured to meet the CID A-A-52080-4 (MIL-T-43435) specification and cover the five materials most commonly used:

- Polyamide (Nylon)
- Polyester (Dacron®)
- Polytetrafluoroethylene (Teflon®)
- Glassfibre
- Heat Resistant Polyamide (Nomex®)

Colours

The standard lacing tape colours are Natural and Black, dependent on the type of material used. For further information on additional colours available, please contact us.

Finishes

The table right shows the finishes that are available that meet the requirements of CID-A-A-52080 to CID-A-A52084 (MIL-T-43435), as well as demanding industrial and commercial applications. Finishes are generally used to improve a lacing tapes physical properties and performance characteristics. Not all finishes are available on all products, for further information please contact us.

The selected designation is added as a suffix to the respective **Gu** or **Br** part number. Ordering example based on CID-A-A-52080 Type I, would be

- Mil ref Type I, Size 3, Finish B
- Gu **18W**
- Br **103-2**

Then state colour

- Gu **18W Black**
- Br **103-2 Black**



When specifying a lacing tape, performance parameters such as fibre type (raw materials), size (physical dimensions), form (flat or round), finish, tensile strength and colours should be considered.

Table of Finishes

Designation			Description
MIL	Gu	Br	
A	U	-1	No Finish
B	W	-2	Microcrystalline, Fungicidal Wax
C	H	-3	Synthetic Rubber or Elastomer
C	Z	n/a	Flame Retarded Rubber
C	PTH	n/a	Low Outgassing Rubber
D	T	-4	Teflon
E	R	-5	Vinyl
F	S	-6	Silicone Resin
G	B/G	-7	Liquid Nylon
#	n/a	-8	Self extinguishing

Meets requirements of Finish C
(Gu = Gudebrod and Br = Breyden)

Approvals Overview

- Airbus NSA 8420
- Boeing BMS-13-54D
- Eurofighter J96.502 and JN1127
- Lockheed
- Panavia 6481
- Raytheon 268-10-11
- Rolls Royce ESW 1900
- Sikorsky SS 7057
- Westland EE 423 (M-T43435T5-3C)

Specifying Information

Lacing Tapes and Yarns

Fibre Type

NYLON Tape CID-A-A-52080 (formerly MIL-T-43435 Type I)

Flat braid manufactured from high tenacity, continuous filament nylon yarn. Temperature range: -55°C to 121°C, melting point 248°C. Available with a variety of finishes as per table.

- General purpose

POLYESTER Tape CID-A-A-52081 (formerly MIL-T-43435 Type II)

Flat braid manufactured from high tenacity, continuous filament polyester yarn. Temperature range -73°C to 177°C, melting point 250°C. Available with a variety of finishes as per table.

- Superior knot tying properties to Nylon
- High temperature performance, available in a range of finishes
- Suitable for aerospace/NASA applications
- Also available 'Pre-shrunk' to reduce longitudinal shrinkage.

TEFLON Tape CID-A-A-52082 (formerly MIL-T-43435 Type III)

Flat braid manufactured from high tenacity, continuous filament teflon yarn. Temperature range -73°C to 232°C, melting point 327°C. Available with a variety of finishes as per table.

- High temperature performance, available in a range of finishes
- Good resistance to fluids and solvents
- Suitable for aircraft engine applications
- Also available 'Pre-shrunk' to reduce longitudinal shrinkage.

GLASS Tape CID-A-A-52083 (formerly MIL-T-43435 Type IV)

Flat braid manufactured from high tenacity, continuous filament glass yarn coated with Teflon before braiding. Temperature range to -55°C to 427°C, melting point 1150°C. Available with a variety of finishes as per table.

- Extremely high temperature performance
- Very low elongation
- Minimal fibre to fibre abrasion
- Produced from continuous filament electrical grade glass (E-Glass).

NOMEX® Tape CID-A-A-52084 (formerly MIL-T-43435 Type V)

Flat braid manufactured from high tenacity, continuous filament Nomex yarn. Temperature range -55°C to 260°C, melting point 371°C. Available with a variety of finishes as per table.

- Excellent high temperature performance and Non flammable
- Highly resistant to fluids and lubricants
- Suitable for critical aircraft harness applications, identifiable by a green coloured tracer.

NYLON Cord MIL-T-713 Type P, Class 1

Meets or exceeds MIL-T-713 Type P. Round twisted 3 ply nylon cord manufactured from high tenacity, continuous filament yarn. Temperature range -55°C to 121°C. Available with no finish, or microcrystalline fungicidal wax finish.

NOMEX® Overbraiding Yarn PAA MIL-C-572

Continuous Filament Nomex yarn twisted to form an essentially round bundle. Available unbonded or bonded with a non-corrosive liquid nylon finish. Temperature range -55°C to 260°C, melting point 371°C. Packaged on cardboard tubes or plastic ratchet bobbins for use on New England Butt #2 braiding machines, other packages are available.

- General purpose
- Superior abrasion and fluid resistance

Polyester overbraiding yarn (MIL-C-572 Type PSTR) also available, please contact us for further information.

TYPE I • NYLON Tape CID-A-A-52080 Braided Lacing Tape

Part Number		Size	Breaking Strength	Tape Width		Tape Thickness		Spool Sizes
Br	Gu	Mil-Spec	Kg (Min.)	mm (Min.)	mm (Max.)	mm (Min.)	mm (Max.)	Metres
101	26	1	61.23	4.57	5.59	0.33	0.48	228
102	23	2	36.29	2.51	3.07	0.30	0.46	228
103	18	3	22.68	1.96	2.39	0.28	0.43	457
104	22	4	11.34	1.37	1.68	0.23	0.38	457
105	20	5	6.80	1.14	1.40	0.15	0.36	457
n/a	21	n/a	9.07	1.42	1.73	0.13	0.28	457
n/a	15	n/a	3.18	0.74	0.89	0.03	0.23	457

Standard colours are Natural and Black, for additional colour choices please contact us.
Dimension in Metric unless otherwise stated

TYPE II • POLYESTER Tape CID-A-A-52081 Braided Lacing Tape

Part Number		Size	Breaking Strength	Tape Width		Tape Thickness		Spool Sizes
Br	Gu	Mil-Spec	Kg (Min.)	mm (Min.)	mm (Max.)	mm (Min.)	mm (Max.)	Metres
201	26D	1	61.23	4.57	5.59	0.33	0.48	228
202	23D	2	36.29	2.51	3.07	0.30	0.46	228
203	18D	3	22.68	1.96	2.39	0.28	0.43	457
204	22D	4	11.34	1.37	1.68	0.23	0.38	457
205	21D	5	6.80	1.14	1.40	0.15	0.36	457
n/a	20D	n/a	5.44	1.09	1.35	0.10	0.25	457
n/a	15D	n/a	1.81	0.74	0.89	0.05	0.20	457

Standard colours are Natural and Black, for additional colour choices please contact us.
Dimension in Metric unless otherwise stated

TYPE III • TEFLON Tape CID-A-A-52082 Braided Lacing Tape

Part Number		Size	Breaking Strength	Tape Width		Tape Thickness		Spool Sizes
Br	Gu	Mil-Spec	Kg (Min.)	mm (Min.)	mm (Max.)	mm (Min.)	mm (Max.)	Metres
302	256	2	13.61	2.74	3.35	0.23	0.36	228
304	231	4	6.80	1.5	1.83	0.23	0.36	457
305	n/a	5	4.50	0.58	0.71	0.23	0.36	457
n/a	230	n/a	6.35	0.71	0.86	0.64	0.79	457
n/a	302	n/a	1.81	0.25	-	-	-	457

Standard colours: Natural (Dark Brown) only, Teflon fibres cannot be dyed or coloured.
Finishes available: 'unfinished' and 'synthetic' only
Dimension in Metric unless otherwise stated

Glass, Nomex® and Nylon Braided Lacing Tape and Twisted Cord Selection Guide

TYPE IV • GLASS Tape CID-A-A-52083 Braided Lacing Tape

Part Number		Size	Breaking Strength	Tape Width		Tape Thickness		Spool Sizes
Br	Gu	Mil-Spec	Kg (Min.)	mm (Min.)	mm (Max.)	mm (Min.)	mm (Max.)	Metres
401	26X	1	90.72	5.16	6.30	0.33	0.48	228
402	23X	2	45.36	2.51	3.07	0.33	0.48	228
403	18X	3	34.02	1.96	2.39	0.33	0.48	457
404	22X	4	22.68	1.37	1.68	0.33	0.48	457
405	n/a	5	22.68	1.14	1.40	0.33	0.48	457
n/a	21X	n/a	31.75	1.73	2.11	0.30	0.46	457

Standard colours are Natural (White) and Black, fibreglass cannot be dyed but finish may be pigmented Black.
Dimension in Metric unless otherwise stated

TYPE V • NOMEX® Tape CID-A-A-52084 Braided Lacing Tape

Part Number		Size	Breaking Strength	Tape Width		Tape Thickness		Spool Sizes
Br	Gu	Mil-Spec	Kg (Min.)	mm (Min.)	mm (Max.)	mm (Min.)	mm (Max.)	Metres
501	726	1	38.56	4.57	5.59	0.33	0.48	228
502	723	2	22.68	2.51	3.07	0.28	0.43	228
503	718	3	15.88	1.73	2.11	0.23	0.38	457
504	722	4	11.34	1.27	1.55	0.18	0.33	457
n/a	1342	n/a	31.75	2.06	2.51	0.43	0.58	228
n/a	946	n/a	2.27	0.30	-	-	-	457

Standard colours are Natural (off White) with a Green tracer. Additional colour choices with or without tracer please contact us.
Dimension in Metric unless otherwise stated

TYPE P • NYLON Cord MIL-T-713 Twisted cord

Part Number		Size	Breaking Strength	Approximate Yield	Diameter		Spool Sizes
Br	Gu	Mil-Spec	Kg (Min.)	Metres per Kg	mm (Min.)	mm (Max.)	Kg
111-2	n/a	1	31.75	273 Wax Finish	0.91	1.12	0.45
111-1	n/a	1	31.75	350 No Finish	0.91	1.12	0.45
112-2	n/a	2	21.77	446 Wax Finish	0.53	0.74	0.45
112-1	n/a	2	21.77	595 No Finish	0.53	0.74	0.45
113-2	n/a	3	14.51	558 Wax Finish	0.48	0.69	0.45
113-1	n/a	3	14.51	744 No Finish	0.48	0.69	0.45

Standard colours are Natural (off White) or Black, no other colours available.
Dimension in Metric unless otherwise stated

Nomex® Overbraiding Yarn Selection Guide



Continuous Filament Nomex yarn twisted to form an essentially round bundle. Material is available unbonded or bonded with a non-corrosive liquid nylon finish. Temperature range -55°C to 260°C, melting point 371°C.

Material packaged on cardboard tubes or plastic ratchet bobbins for use on New England Butt #2 braiding machines, other packages are available.

Ordering Information

When ordering please specify the denier, finish, colour, number of ply per end x number of ends, material and bobbin requirement, as per example shown below;

200 B Natural 1x4 Nomex® R.

TYPE PAA • NOMEX® MIL-C-572 Overbraiding Yarn

Yarn Size	Number of Filaments	Breaking Strength	Nominal Diameter	Yarn Elongation	Parallel Ends per Bobbin	Spool Sizes
		Kg (Min.)	mm (Min.)			Metres
200 Denier	100	1.24	0.152	35%	1-8	4,572
1200 Denier	600	6.45	0.305	37%	1-4	914.4

Code	Finishes	Comments
U	Untreated	General Purpose
B	Bonded with non-corrosive, flame retardant Polyamide	Superior abrasion resistance. Excellent fluid resistance

Put-Up	Length tube	Length braid	Width	Height	Tube Ø	Taper
T	133.50	120.65	6.35 tube	47.63	20.96	30°
R	155.58	134.94	46.04 bobbin	44.45	7.94	-

Standard colours are Natural (Off White) Olive Drab, Black and Red, other colours are available in bond dyed form or with unbonded yarn in minimum dye lots, for details please contact us.
Dimension in millimeters unless otherwise stated

TYPE PSTR • POLYESTER Mil-C-572 Overbraiding Yarn

Also available please contact us for details

